R6000.14.5

An Assessment of Research-Doctorate Programs in the United States: *Social & Behavioral Sciences*

Committee on an Assessment of Quality-Related Characteristics of Research-Doctorate Programs in the United States

Lyle V. Jones, Gardner Lindzey, and
Porter E. Coggeshall, *Editors*

Sponsored by

The Conference Board of Associated Research Councils

American Council of Learned Societies
American Council on Education
National Research Council
Social Science Research Council

NATIONAL ACADEMY PRESS
Washington, D.C. 1982

NOTICE: The project that is the subject of this report was approved by the Conference Board of Associated Research Councils, whose members are drawn from the American Council of Learned Societies, the American Council on Education, the National Research Council, and the Social Science Research Council. The members of the committee responsible for the report were chosen for their special competences and with regard for appropriate balance.

This report has been reviewed by a group other than the authors and editors according to procedures approved by each of the four member Councils of the Conference Board.

The Conference Board of Associated Research Councils was created to foster discussion of issues of mutual interest; to determine the extent to which a common viewpoint on such issues prevails within the academic community of the United States; to foster specific investigations when so desired; and, when the Conference Board finds joint, common, or other action desirable, to make recommendations to the appropriate Councils.

Library of Congress Catalog Card Number 82-62699

International Standard Book Number 0-309-03342-X

Available from

NATIONAL ACADEMY PRESS
2101 Constitution Avenue, N.W.
Washington, D.C. 20418

Copyright © 1982 by the National Academy of Sciences

No part of this publication may be reporduced without permission of the National Academy of Sciences except for official use by the United States Government.

Printed in the United States of America

Acknowledgments

In conducting this assessment the committee has benefited from the support and advice of many individuals and organizations. The assessment was conducted under the aegis of the Conference Board of Associated Research Councils, and special thanks go to Roger Heyns, Robert M. Lumiansky, Jack W. Peltason, Frank Press, Kenneth Prewitt, Eleanor Sheldon, John William Ward, and the late Philip Handler for their efforts in overseeing the planning and execution of this project. Financial support was provided by the Andrew W. Mellon Foundation, the Ford Foundation, the Alfred P. Sloan Foundation, the National Institutes of Health (NIH), the National Science Foundation (NSF), and the National Academy of Sciences. Without the combined support from these organizations the project would not have been undertaken. The committee appreciates the excellent cooperation it received from the staff officers at these organizations--including John Sawyer and James Morris at Mellon; Mariam Chamberlain, Gladys Chang Hardy, and Sheila Biddle at Ford; Albert Rees and James Koerner at Sloan; Helen Gee at NIH; and Bernard Stein at NSF. Some supplemental funds to enhance the study were furnished by the Association of American Geographers, the American Psychological Association, and the American Psychological Foundation.

The committee is most appreciative of the cooperation it received from individuals in the 228 universities participating in the assessment. In particular we thank the university presidents and chancellors who agreed to participate and offered the assistance of staff members at their institutions; the graduate deans, department chairmen, and many other university personnel who helped to compile information about the research-doctorate programs at their own institutions; and the nearly 5,000 faculty members who took the time to complete and return reputational survey forms. This assessment would not have been feasible without the participation of these individuals. Nor would it have been complete without the suggestions from many individuals within and outside the academic community who reviewed the study plans and committee reports.

The committee also acknowledges the contributions of Francis Narin and Paul R. McAllister, whose innovative work in the area of publication productivity in science and engineering fields has been a valuable resource. We thank H. Roberts Coward and his colleagues at the Insti-

tute for Scientific Information for their help in compiling publications data as well as William Batchelor and John James at NIH and David Staudt at NSF for their help in acquiring data on individual research grant awards.

Within the National Research Council many individuals have assisted in the planning and completion of this project. Robert A. Alberty, Harrison Shull, and W. K. Estes, former chairmen of the Commission on Human Resources, and William C. Kelly, Executive Director of the commission (now the Office of Scientific and Engineering Personnel), offered assistance and helpful counsel during all phases of the study. Lindsey R. Harmon and C. Alan Boneau contributed greatly to the planning of the assessment.

To Porter E. Coggeshall, Study Director, the committee expresses thanks for a job extremely well done. His ability to translate the committee's directions into compiled data and analyses must be given a large share of the credit for the completion of this project. He has been ably assisted by Prudence W. Brown, who supervised the data collection activities; Dorothy G. Cooper, who provided excellent secretarial support; George A. Boyce, whose programming expertise was invaluable; and Kathleen Drennan and Linda Dix, who helped in preparing final copy of the manuscript.

Committee on an Assessment of Quality-Related
Characteristics of Research-Doctorate Programs
in the United States

Preface

The genius of American higher education is often said to be in the close association of training and research--that is, in the nation's research-doctorate programs. Consequently, we are not surprised at the amount of worried talk about the quality of the research doctorate, for deterioration at that level will inevitably spread to wherever research skills are needed--and that indeed is a far-flung network of laboratories, institutes, firms, agencies, bureaus, and departments. What might surprise us, however, is the imbalance between the putative national importance of research-doctorate programs and the amount of sustained evaluative attention they themselves receive.

The present assessment, sponsored by the Conference Board of Associated Research Councils--comprised of the American Council of Learned Societies, the American Council on Education, the National Research Council (NRC), and the Social Science Research Council--seeks to correct the imbalance between worried talk and systematic study. In this effort the Conference Board continues a tradition pioneered by the American Council on Education, which in 1966 published An Assessment of Quality in Graduate Education, the report of a study conducted by Allan M. Cartter, and in 1970 published A Rating of Graduate Programs, by Kenneth D. Roose and Charles J. Andersen. The Cartter and Roose-Andersen reports have been widely used and frequently cited.

Some years after the release of the Roose-Andersen report, it was decided that the effort to assess the quality of research-doctorate programs should be renewed, and the Conference Board of Associated Research Councils agreed to sponsor an assessment. The Board of Directors of the American Council on Education concurred with the notion that the next study should be issued under these broader auspices. The NRC agreed to serve as secretariat for a new study. The responsible staff of the NRC earned the appreciation of the Conference Board for the skill and dedication shown during the course of securing funding and implementing the study. Special mention should also be made of the financial contribution of the National Academy of Sciences which, by supplementing funds available from external sources, made it possible for the study to get under way.

To sponsor a study comparing the quality of programs in 32 disciplines and from more than 200 doctorate-granting universities is to invite critics, friendly and otherwise. Such was the fate of the previous studies; such has been the fate of the present study. Scholarship, fortunately, can put criticism to creative use and has done so in this project. The study committee appointed by the Conference Board reviewed the criticisms of earlier efforts to assess research-doctorate programs, and it actively solicited criticisms and suggestions for improvements of its own design. Although constrained by limited funds, the committee applied state-of-the-art methodology in a design that incorporated the lessons learned from previous studies as well as attending to many critics of the present effort. Not all criticism has thus been stilled; nor could it ever be. Additional criticisms will be voiced by as many persons as begin to use the results of this effort in ways not anticipated by its authors. These criticisms will be welcome. The Conference Board believes that the present study, building on earlier criticisms and adopting a multidimensional approach to the assessment of research-doctorate programs, represents a substantial improvement over past reports. Nevertheless, each of the diverse measures used here has its own limitations, and none provides a precise index of the quality of a program for educating students for careers in research. No doubt a future study, taking into account the weaknesses as well as strengths of this effort, will represent still further improvement. One mark of success for the present study would be for it to take its place in a continuing series, thereby contributing to the indicator base necessary for informed policies that will maintain and perhaps enhance the quality of the nation's research-doctorate programs.

For the more immediate future the purposes of this assessment are to assist students and student advisers seeking the best match possible between individual career goals and the choice of an advanced degree program; to serve scholars whose study site is higher education and the nation's research enterprise; and to inform the practical judgment of the administrators, funders, and policymakers responsible for protecting the quality of scholarly education in the United States.

A remarkably hard-working and competent group, whose names appear on page vii of this report, oversaw the long process by which this study moved from the planning stage to the completion of these reports. The Conference Board expresses its warmest thanks to the members of its committee and especially to their co-chairmen, Lyle V. Jones and Gardner Lindzey.

Conference Board of Associated
Research Councils

Committee on an Assessment of Quality-Related Characteristics of Research-Doctorate Programs in the United States

LYLE V. JONES (Co-Chairman), Director of the L. L. Thurstone Psychometric Laboratory, University of North Carolina at Chapel Hill
GARDNER LINDZEY (Co-Chairman), Director, Center for Advanced Study in the Behavioral Sciences
PAUL A. ALBRECHT, Vice-President and Dean, Claremont Graduate School
MARCUS ALEXIS, Department of Economics, Northwestern University
ROBERT M. BOCK, Dean of the Graduate School, University of Wisconsin at Madison
PHILIP E. CONVERSE, Institute for Social Research, University of Michigan
JAMES H. M. HENDERSON, Department of Plant Physiology, Tuskegee Institute of Alabama
ERNEST S. KUH, Department of Electrical Engineering and Computer Sciences, University of California, Berkeley
WINFRED P. LEHMANN, Department of Linguistics, University of Texas at Austin
SAUNDERS MAC LANE, Department of Mathematics, University of Chicago
NANCY S. MILBURN, Dean, College of Liberal Arts and Jackson College for Women, Tufts University
LINCOLN E. MOSES, Department of Statistics, Stanford University
JAMES C. OLSON, President, University of Missouri
C. K. N. PATEL, Director, Physical Research Laboratory, Bell Laboratories
MICHAEL J. PELCZAR, JR., President, The Council of Graduate Schools in the United States
JEROME B. SCHNEEWIND, Department of Philosophy, Johns Hopkins University
DUANE C. SPRIESTERSBACH, Vice-President, Educational Development and Research, University of Iowa
HARRIET A. ZUCKERMAN, Sociology Department, Columbia University

Study Director

PORTER E. COGGESHALL, Office of Scientific and Engineering Personnel, National Research Council

Contents

I ORIGINS OF STUDY AND SELECTION OF PROGRAMS 1
  Prior Attempts to Assess Quality in Graduate Education, 3
  Development of Study Plans, 6
  Selection of Disciplines and Programs to be Evaluated, 8

II METHODOLOGY 13
  Program Size, 17
  Characteristics of Graduates, 17
  Reputational Survey Results, 20
  University Library Size, 25
  Research Support, 26
  Publication Records, 27
  Analysis and Presentation of the Data, 30

III ANTHROPOLOGY PROGRAMS 33

IV ECONOMICS PROGRAMS 51

V GEOGRAPHY PROGRAMS 71

VI HISTORY PROGRAMS 87

VII POLITICAL SCIENCE PROGRAMS 109

VIII PSYCHOLOGY PROGRAMS 129

XI SOCIOLOGY PROGRAMS 155

X SUMMARY AND DISCUSSION 175
  Summary of the Results, 176
  Correlations Among Measures, 179
  Analysis of the Survey Response, 187
  Interpretation of Reputational Survey Ratings, 200
  Comparison with Results of the Roose-Andersen Study, 201
  Future Studies, 210

MINORITY STATEMENT 213

APPENDIXES

A Letter to Institutional Coordinators and Accompanying Survey Form (Measures 01-03) 217
B Survey of Earned Doctorates (Measures 04-07) 224
C Letter to Evaluators and Specimen of the Instrument Used in the Reputational Survey (Measures 08-11) 227
D The ARL Library Index (Measure 12) 233
E Data on Faculty Research Support and R&D Expenditures (Measures 13 and 14) 235
F Data on Publication Records (Measures 17 and 18) 240
G Conference on the Assessment of Quality of Graduate Education Programs--Participants and Summary 241
H Planning Committee for the Study of the Quality of Research-Doctorate Programs 245
I Region and State Codes for the United States and Possessions 246
J Alternative Measures of Published Articles in Psychology 247

LIST OF FIGURES

3.1 Mean rating of scholarly quality of faculty (measure 08) versus number of faculty members (measure 01)--70 programs in anthropology, 46
3.2 Mean rating of program effectiveness in educating research scholars/scientists (measure 09) versus number of graduates in last five years (measure 02)--70 programs in anthropology, 47
3.3 Mean rating of scholarly quality of faculty in 70 programs in anthropology, 49
4.1 Mean rating of scholarly quality of faculty (measure 08) versus number of faculty members (measure 01)--93 programs in economics, 66
4.2 Mean rating of program effectiveness in educating research scholars/scientists (measure 09) versus number of graduates in last five years (measure 02)--93 programs in economics, 67
4.3 Mean rating of scholarly quality of faculty in 93 programs in economics, 69
5.1 Mean rating of scholarly quality of faculty (measure 08) versus number of faculty members (measure 01)--49 programs in geography, 82
5.2 Mean rating of program effectiveness in educating research scholars/scientists (measure 09) versus number of graduates in last five years (measure 02)--49 programs in geography, 83
5.3 Mean rating of scholarly quality of faculty in 49 programs in geography, 87
6.1 Mean rating of scholarly quality of faculty (measure 08) versus number of faculty members (measure 01)--102 programs in history, 104

6.2 Mean rating of program effectiveness in educating research scholars/scientists (measure 09) versus number of graduates in last five years (measure 02)--102 programs in history, 105
6.3 Mean rating of scholarly quality of faculty in 102 programs in history, 107
7.1 Mean rating of scholarly quality of faculty (measure 08) versus number of faculty members (measure 01)--83 programs in political science, 124
7.2 Mean rating of program effectiveness in educating research scholars/scientists (measure 09) versus number of graduates in last five years (measure 02)--82 programs in political science, 125
7.3 Mean rating of scholarly quality of faculty in 83 programs in political science, 127
8.1 Mean rating of scholarly quality of faculty (measure 08) versus number of faculty members (measure 01)--150 programs in psychology, 150
8.2 Mean rating of program effectiveness in educating research scholars/scientists (measure 09) versus number of graduates in last five years (measure 02)--141 programs in psychology, 151
8.3 Mean rating of scholarly quality of faculty in 150 programs in psychology, 153
9.1 Mean rating of scholarly quality of faculty (measure 08) versus number of faculty members (measure 01)--92 programs in sociology, 170
9.2 Mean rating of program effectiveness in educating research scholars/scientists (measure 09) versus number of graduates in last five years (measure 02)--92 programs in sociology, 171
9.3 Mean rating of scholarly quality of faculty in 92 programs in sociology, 173
10.1 Mean rating of scholarly quality of faculty (measure 08) versus mean rating of faculty in the Roose-Andersen study--38 programs in anthropology, 203
10.2 Mean rating of scholarly quality of faculty (measure 08) versus mean rating of faculty in the Roose-Andersen study--71 programs in economics, 204
10.3 Mean rating of scholarly quality of faculty (measure 08) versus mean rating of faculty in the Roose-Andersen study--31 programs in geography, 205
10.4 Mean rating of scholarly quality of faculty (measure 08) versus mean rating of faculty in the Roose-Andersen study--79 programs in history, 206
10.5 Mean rating of scholarly quality of faculty (measure 08) versus mean rating of faculty in the Roose-Andersen study--61 programs in political science, 207
10.6 Mean rating of scholarly quality of faculty (measure 08) versus mean rating of faculty in the Roose-Andersen study--103 programs in psychology, 208
10.7 Mean rating of scholarly quality of faculty (measure 08) versus mean rating of faculty in the Roose-Andersen study--65 programs in sociology, 209

LIST OF TABLES

1.1 Number of Research-Doctorates Awarded in Social and Behavioral Science Disciplines, FY1976-78, 10

1.2 Number of Programs Evaluated in Each Discipline and the Total FY1976-80 Doctoral Awards from These Programs, 12

2.1 Measures Compiled on Individual Research-Doctorate Programs in the Social and Behavioral Sciences, 15

2.2 Percentage of FY1975-79 Doctoral Recipients with Definite Commitments for Employment Outside the Academic Sector, 20

2.3 Survey Response by Discipline and Characteristics of Evaluator, 22

3.1 Program Measures (Raw and Standardized Values) in Anthropology, 36

3.2 Summary Statistics Describing Each Program Measure--Anthropology, 44

3.3 Intercorrelations Among Program Measures on 70 Programs in Anthropology, 45

3.4 Characteristics of Survey Participants in Anthropology, 48

4.1 Program Measures (Raw and Standardized Values) in Economics, 54

4.2 Summary Statistics Describing Each Program Measure--Economics, 64

4.3 Intercorrelations Among Program Measures on 93 Programs in Economics, 65

4.4 Characteristics of Survey Participants in Economics, 68

5.1 Program Measures (Raw and Standardized Values) in Geography, 74

5.2 Summary Statistics Describing Each Program Measure--Geography, 80

5.3 Intercorrelations Among Program Measures on 49 Programs in Geography, 81

5.4 Characteristics of Survey Participants in Geography, 84

6.1 Program Measures (Raw and Standardized Values) in History, 90

6.2 Summary Statistics Describing Each Program Measure--History, 102

6.3 Intercorrelations Among Program Measures on 102 Programs in History, 103

6.4 Characteristics of Survey Participants in History, 106

7.1 Program Measures (Raw and Standardized Values) in Political Science, 112

7.2 Summary Statistics Describing Each Program Measure--Political Science, 122

7.3 Intercorrelations Among Program Measures on 83 Programs in Political Science, 123

7.4 Characteristics of Survey Participants in Political Science, 126

8.1 Program Measures (Raw and Standardized Values) in Psychology, 132

8.2 Summary Statistics Describing Each Program Measure--Psychology, 148

8.3 Intercorrelations Among Program Measures on 150 Programs in Psychology, 149

8.4 Characteristics of Survey Participants in Psychology, 152

9.1 Program Measures (Raw and Standardized Values) in Sociology, 158

9.2 Summary Statistics Describing Each Program Measure--Sociology, 168

9.3 Intercorrelations Among Program Measures on 92 Programs in Sociology, 169
9.4 Characteristics of Survey Participants in Sociology, 172
10.1 Mean Values for Each Program Measure, by Discipline, 181
10.2 Correlations of the Number of Program Graduates (Measure 02) with Other Measures, by Discipline, 181
10.3 Correlations of the Survey Ratings of Scholarly Quality of Program Faculty (Measure 08) with Other Measures, by Discipline, 182
10.4 Correlations of the University Research Expenditures in a Discipline (Measure 14) with Other Measures, by Discipline, 185
10.5 Correlations of Measure 17 with Other Measures, by Discipline, 186
10.6 Distribution of Responses to Each Survey Item, by Discipline, 188
10.7 Survey Item Response Rates, by Discipline and Mean Rating on Measure 08, 189
10.8 Correlations Between Two Sets of Average Ratings from Two Randomly Selected Groups of Evaluators in the Social Sciences, 191
10.9 Comparison of Mean Ratings for Eleven Mathematics Programs Included in Two Separate Survey Administrations, 193
10.10 Mean Ratings of Scholarly Quality of Program Faculty, by Evaluator's Familiarity with Work of Faculty, 194
10.11 Item Response Rate on Measure 08, by Selected Characteristics of Survey Evaluators in the Social Sciences, 195
10.12 Mean Ratings of Scholarly Quality of Program Faculty, by Type of Survey Form Provided to Evaluator, 196
10.13 Mean Ratings of Scholarly Quality of Program Faculty, by Evaluator's Proximity to Region of Program, 197
10.14 Mean Ratings of Scholarly Quality of Program Faculty, by Evaluator's Institution of Highest Degree, 198
10.15 Mean Ratings of Scholarly Quality of Program Faculty, by Evaluator's Field of Specialty within Psychology, 199
J.1 Alternative Measures of Published Articles in Psychology (Raw and Standardized Values), 248

I

Origins of Study and Selection of Programs

Each year more than 22,000 candidates are awarded doctorates in engineering, the humanities, and the sciences from approximately 250 U.S. universities. They have spent, on the average, five-and-a-half years in intensive education and research in preparation for careers either in universities or in settings outside the academic sector, and many will make significant contributions to research. Yet we are poorly informed concerning the quality of the programs producing these graduates. This study is intended to provide information pertinent to this complex and controversial subject.

The charge to the study committee directed it to build upon the planning that preceded it. The planning stages included a detailed review of the methodologies and the results of past studies that had focused on the assessment of doctoral-level programs. The committee has taken into consideration the reactions of various groups and individuals to those studies. The present assessment draws upon previous experience with program evaluation, with the aim of improving what was useful and avoiding some of the difficulties encountered in past studies. The present study, nevertheless, is not purely reactive: it has its own distinctive features. First, it focuses only on programs awarding research doctorates and their effectiveness in preparing students for careers in research. Although other purposes of graduate education are acknowledged to be important, they are outside the scope of this assessment. Second, the study examines a variety of different indices that may be relevant to the program quality. This multidimensional approach represents an explicit recognition of the limitations of studies that rely entirely on peer ratings of perceived quality--the so-called reputational ratings. Finally, in the compilation of reputational ratings in this study, evaluators were provided the names of faculty members involved with each program to be rated and the number of research doctorates awarded in the last five years. In previous reputational studies evaluators were not supplied such information.

During the past two decades increasing attention has been given to describing and measuring the quality of programs in graduate education. It is evident that the assessment of graduate programs is highly important for university administrators and faculty, for employers in industrial and government laboratories, for graduate students and prospective graduate students, for policymakers in state and national organizations, and for private and public funding agencies. Past experience, however, has demonstrated the difficulties with such assessments and their potentially controversial nature. As one critic has asserted:

> . . . the overall *effect* of these reports seems quite clear. They tend, first, to make the rich richer and the poor poorer; second, the example of the highly ranked clearly imposes constraints on those institutions lower down the scale (the "Hertz-Avis" effect). And the effect of such constraints is to reduce diversity, to reward conformity or respectability, to penalize genuine experiment or risk. There is, also, I believe, an obvious tendency to promote the prevalence of disciplinary dogma and orthodoxy. All of this might be tolerable if the reports were tolerably accurate and judicious, if they were less *prescriptive* and more *descriptive*; if they did not pretend to "objectivity" and if the very fact of ranking were not pernicious and invidious; if they genuinely promoted a meaningful "meritocracy" (instead of simply perpetuating the *status quo ante* and an establishment mentality). But this is precisely what they cannot claim to be or do.[1]

The widespread criticisms of ratings in graduate education were carefully considered in the planning of this study. At the outset consideration was given to whether a national assessment of graduate programs should be undertaken at this time and, if so, what methods should be employed. The next two sections in this chapter examine the background and rationale for the decision by the Conference Board of Associated Research Councils[2] to embark on such a study. The remainder of the chapter describes the selection of disciplines and programs to be covered in the assessment.

The overall study encompasses a total of 2,699 graduate programs in 32 disciplines. In this report--the fifth and final report issuing from the study--we examine 639 programs in seven disciplines in the social and behavioral sciences: anthropology, economics, geography, history, political science, psychology, and sociology. These programs account for more than 90 percent of the research doctorates awarded in these seven disciplines. It should be emphasized that the selection of disciplines to be covered was determined on the basis of total doctoral awards during the FY1976-78 period (as described later in this chapter), and the exclusion of a particular discipline was in no way based on a judgment of the importance of graduate education or research in that discipline. Also, although the assessment is limited to programs leading to the research-doctorate (Ph.D. or equivalent) degree, the Conference Board and study committee recognize that graduate schools provide many other forms of valuable and needed education.

---

[1] William A. Arrowsmith, "Preface" in *The Ranking Game: The Power of the Academic Elite*, by W. Patrick Dolan, University of Nebraska Printing and Duplicating Service, Lincoln, Nebraska, 1976, p. ix.

[2] The Conference Board includes representatives of the American Council of Learned Societies, American Council on Education, National Research Council, and Social Science Research Council.

PRIOR ATTEMPTS TO ASSESS QUALITY IN GRADUATE EDUCATION

Universities and affiliated organizations have taken the lead in the review of programs in graduate education. At most institutions program reviews are carried out on a regular basis and include a comprehensive examination of the curriculum and educational resources as well as the qualifications of faculty and students. One special form of evaluation is that associated with institutional accreditation:

> The process begins with the institutional or programmatic self-study, a comprehensive effort to measure progress according to previously accepted objectives. The self-study considers the interest of a broad cross-section of constituencies--students, faculty, administrators, alumni, trustees, and in some circumstances the local community. The resulting report is reviewed by the appropriate accrediting commission and serves as the basis for evaluation by a site-visit team from the accrediting group. . . . Public as well as educational needs must be served simultaneously in determining and fostering standards of quality and integrity in the institutions and such specialized programs as they offer. Accreditation, conducted through nongovernmental institutional and specialized agencies, provides a major means for meeting those needs.[3]

Although formal accreditation procedures play an important role in higher education, many university administrators do not view such procedures as an adequate means of assessing program quality. Other efforts are being made by universities to evaluate their programs in graduate education. The Educational Testing Service, with the sponsorship of the Council of Graduate Schools in the United States and the Graduate Record Examinations Board, has recently developed a set of procedures to assist institutions in evaluating their own graduate programs.[4]

---

[3] Council on Postsecondary Accreditation, The Balance Wheel for Accreditation, Washington, D.C., July 1981, pp. 2-3.

[4] For a description of these procedures, see M. J. Clark, Graduate Program Self-Assessment Service: Handbook for Users, Educational Testing Service, Princeton, New Jersey, 1980.

While reviews at the institutional (or state) level have proven useful in assessing the relative strengths and weaknesses of individual programs, they have not provided the information required for making national comparisons of graduate programs. Several attempts have been made at such comparisons. The most widely used of these have been the studies by Keniston (1959), Cartter (1966), and Roose and Andersen (1970). All three studies covered a broad range of disciplines in engineering, the humanities, and the sciences and were based on the opinions of knowledgeable individuals in the program areas covered. Keniston[5] surveyed the department chairmen at 25 leading institutions. The Cartter[6] and Roose-Andersen[7] studies compiled ratings from much larger groups of faculty peers. The stated motivation for these studies was to increase knowledge concerning the quality of graduate education:

> A number of reasons can be advanced for undertaking such a study. The diversity of the American system of higher education has properly been regarded by both the professional educator and the layman as a great source of strength, since it permits flexibility and adaptability and encourages experimentation and competing solutions to common problems. Yet diversity also poses problems. . . . Diversity can be a costly luxury if it is accompanied by ignorance. . . . Just as consumer knowledge and honest advertising are requisite if a competitive economy is to work satisfactorily, so an improved knowledge of opportunities and of quality is desirable if a diverse educational system is to work effectively.[8]

Although the program ratings from the Cartter and Roose-Andersen studies are highly correlated, some substantial differences in successive ratings can be detected for a small number of programs--suggesting changes in the programs or in the perception of the programs. For the past decade the Roose-Andersen ratings have generally been regarded as the best available source of information on the quality of doctoral programs. Although the ratings are now more than 10 years out of date and have been criticized on a variety of grounds, they are still used extensively by individuals within the academic community and by those in federal and state agencies.

---

[5] H. Keniston, Graduate Study in Research in the Arts and Sciences at the University of Pennsylvania, University of Pennsylvania Press, Philadelphia, 1959.

[6] A. M. Cartter, An Assessment of Quality in Graduate Education, American Council on Education, Washington, D.C., 1966.

[7] K. D. Roose and C. J. Andersen, A Rating of Graduate Programs, American Council on Education, Washington, D.C., 1970.

[8] Cartter, p. 3.

A frequently cited criticism of the Cartter and Roose-Andersen studies is their exclusive reliance upon reputational measurement.

> The ACE rankings are but a small part of all the evaluative processes, but they are also the most public, and they are clearly based on the narrow assumptions and elitist structures that so dominate the present direction of higher education in the United States. As long as our most prestigious source of information about postsecondary education is a vague popularity contest, the resultant ignorance will continue to provide a cover for the repetitious aping of a single model. . . . All the attempts to change higher education will ultimately be strangled by the "legitimate" evaluative processes that have already programmed a single set of responses from the start.[9]

A number of other criticisms have been leveled at reputational rankings of graduate programs.[10] First, such studies inherently reflect perceptions that may be several years out of date and do not take into account recent changes in a program. Second, the ratings of individual programs are likely to be influenced by the overall reputation of the university--i.e., an institutional "halo effect." Also, a disproportionately large fraction of the evaluators are graduates of and/or faculty members in the largest programs, which may bias the survey results. Finally, on the basis of such studies it may not be possible to differentiate among many of the lesser known programs in which relatively few faculty members have established national reputations in research.

Despite such criticisms several studies based on methodologies similar to that employed by Cartter and Roose and Andersen have been carried out during the past 10 years. Some of these studies evaluated post-baccalaureate programs in areas not covered in the two earlier reports--including business, religion, educational administration, and medicine. Others have focused exclusively on programs in particular disciplines within the sciences and humanities. A few attempts have been made to assess graduate programs in a broad range of disciplines, many of which were covered in the Roose-Andersen and Cartter ratings, but in the opinion of many each has serious deficiencies in the methods and procedures employed. In addition to such studies, a myriad of articles have been written on the assessment of graduate programs since the release of the Roose-Andersen report. With the heightening interest in these evaluations, many in the academic community have recognized the need to assess graduate programs, using other criteria in addition to peer judgment.

---

[9] Dolan, p. 81.

[10] For a discussion of these criticisms, see David S. Webster, "Methods of Assessing Quality," Change, October 1981, pp. 20-24.

> Though carefully done and useful in a number of ways, these ratings (Cartter and Roose-Andersen) have been criticized for their failure to reflect the complexity of graduate programs, their tendency to emphasize the traditional values that are highly related to program size and wealth, and their lack of timeliness or currency. Rather than repeat such ratings, many members of the graduate community have voiced a preference for developing ways to assess the quality of graduate programs that would be more comprehensive, sensitive to the different program purposes, and appropriate for use at any time by individual departments or universities.[11]

Several attempts have been made to go beyond the reputational assessment. Clark, Harnett, and Baird, in a pilot study[12] of graduate programs in chemistry, history, and psychology, identified as many as 30 possible measures significant for assessing the quality of graduate education. Glower[13] has ranked engineering schools according to the total amount of research spending and the number of graduates listed in Who's Who in Engineering. House and Yeager[14] rated economics departments on the basis of the total number of pages published by full professors in 45 leading journals in this discipline. Other ratings based on faculty publication records have been compiled for graduate programs in a variety of disciplines, including political science, psychology, and sociology. These and other studies demonstrate the feasibility of a national assessment of graduate programs that is founded on more than reputational standing among faculty peers.

DEVELOPMENT OF STUDY PLANS

In September 1976 the Conference Board, with support from the Carnegie Corporation of New York and the Andrew W. Mellon Foundation, convened a three-day meeting to consider whether a study of programs in graduate education should be undertaken. The 40 invited participants in this meeting included academic administrators, faculty members, and agency and foundation officials[15] and represented a variety of institutions, disciplines, and convictions. In these discussions there was considerable debate concerning whether the potential benefits of such a study outweighed the possible misrepresentations of the results. On the one hand, "a substantial majority of the Conference [participants believed] that the earlier assessments of graduate education have received wide and important use: by students and their advisors, by the institutions of higher education as aids to planning and the allocation of educational functions, as a check on unwarranted claims of excellence, and in social science research."[16] On the other hand, the Conference participants recognized that a new study assessing the quality of graduate education "would be conducted and received in a very different atmosphere than were the earlier Cartter and Roose-Andersen reports. . . . Where ratings were previously used in deciding where to increase funds and how to balance expanding programs, they might now be used in deciding where to cut off funds and programs."

---

[11] Clark, p. 1.

[12] M. J. Clark, R. T. Harnett, and L. L. Baird, Assessing Dimensions of Quality in Doctoral Education: A Technical Report of a National Study in Three Fields, Educational Testing Service, Princeton, New Jersey, 1976.

[13] Donald D. Glower, "A Rational Method for Ranking Engineering Programs," Engineering Education, May 1980.

[14] Donald R. House and James H. Yeager, Jr., "The Distribution of Publication Success Within and Among Top Economics Departments: A Disaggregate View of Recent Evidence," Economic Inquiry, Vol. 16, No. 4, October 1978, pp. 593-598.

After an extended debate of these issues, it was the recommendation of this conference that a study with particular emphasis on the effectiveness of doctoral programs in educating research personnel be undertaken. The recommendation was based principally on four considerations:

(1) the importance of the study results to national and state bodies,
(2) the desire to stimulate continuing emphasis on quality in graduate education,
(3) the need for current evaluations that take into account the many changes that have occurred in programs since the Roose-Andersen study, and
(4) the value of extending the range of measures used in evaluative studies of graduate programs.

Although many participants expressed interest in an assessment of master's degree and professional degree programs, insurmountable problems prohibited the inclusion of these types of programs in this study.

Following this meeting a 13-member committee,[17] co-chaired by Gardner Lindzey and Harriet A. Zuckerman, was formed to develop a detailed plan for a study limited to research-doctorate programs and designed to improve upon the methodologies utilized in earlier studies. In its deliberations the planning committee carefully considered the criticisms of the Roose-Andersen study and other national assessments. Particular attention was paid to the feasibility of compiling a variety of specific measures (e.g., faculty publication records, quality of students, program resources) that were judged to be related to the quality of research-doctorate programs. Attention was also given to making improvements in the survey instrument and procedures used in the

---

[15] See Appendix G for a list of the participants in this conference.
[16] From a summary of the Woods Hole Conference (see Appendix G).
[17] See Appendix H for a list of members of the planning committee.

Cartter and Roose-Andersen studies. In September 1978 the planning group submitted a comprehensive report describing alternative strategies for an evaluation of the quality and effectiveness of research-doctorate programs.

> The proposed study has its own distinctive features. It is characterized by a sharp focus and a multidimensional approach. (1) It will focus only on programs awarding research doctorates; other purposes of doctoral training are acknowledged to be important, but they are outside the scope of the work contemplated. (2) The multidimensional approach represents an explicit recognition of the limitations of studies that make assessments solely in terms of ratings of perceived quality provided by peers--the so-called reputational ratings. Consequently, a variety of quality-related measures will be employed in the proposed study and will be incorporated in the presentation of the results of the study.[18]

This report formed the basis for the decision by the Conference Board to embark on a national assessment of doctorate-level programs in the sciences, engineering, and the humanities.

In June 1980 an 18-member committee was appointed to oversee the study. The committee,[19] made up of individuals from a diverse set of disciplines within the sciences, engineering, and the humanities, includes seven members who had been involved in the planning phase and several members who presently serve or have served as graduate deans in either public or private universities. During the first eight months the committee met three times to review plans for the study activities, make decisions on the selection of disciplines and programs to be covered, and design the survey instruments to be used. Early in the study an effort was made to solicit the views of presidents and graduate deans at more than 250 universities. Their suggestions were most helpful to the committee in drawing up final plans for the assessment. With the assistance of the Council of Graduate Schools in the United States, the committee and its staff have tried to keep the graduate deans informed about the progress being made in this study. The final section of this chapter describes the procedures followed in determining which research-doctorate programs were to be included in the assessment.

SELECTION OF DISCIPLINES AND PROGRAMS TO BE EVALUATED

One of the most difficult decisions made by the study committee was the selection of disciplines to be covered in the assessment. Early in the planning stage it was recognized that some important areas of graduate education would have to be left out of the study. Limited financial resources required that efforts be concentrated on a total of no more than about 30 disciplines in the biological sciences, engineering, humanities, mathematical and physical sciences, and social and behavioral sciences. At its initial meeting the committee decided that the selection of disciplines within each of these five areas should be made primarily on the basis of the total number of doctorates awarded nationally in recent years.

---

[18] National Research Council, A Plan to Study the Quality and Effectiveness of Research-Doctorate Programs, 1978 (unpublished report).

[19] See p. vii for a list of members of the study committee.

At the time the study was undertaken, aggregate counts of doctoral degrees earned during the FY1976-78 period were available from two independent sources--the Educational Testing Service (ETS) and the National Research Council (NRC). Table 1.1 presents doctoral awards data for 10 disciplines within the social and behavioral sciences. As alluded to in footnote 1 of the table, discrepancies between the ETS and NRC counts may be explained, in part, by differences in the data collection procedures. The ETS counts, derived from information provided by universities, have been categorized according to the discipline of the department/academic unit in which the degree was earned. The NRC counts were tabulated from the survey responses of FY1976-78 Ph.D. recipients, who had been asked to identify their fields of specialty. Originally the committee had decided to include only the first six social and behavioral science disciplines listed in Table 1.1. However, at the urging of many individuals in the academic community and at the request of the National Science Foundation, which provided supplemental funding, geography[20] was added to the list of social and behavioral science disciplines to be covered in the assessment. Since the decision to include geography was not made until spring 1981, the survey of evaluators in this discipline was not undertaken until five months after the survey in other disciplines.

The selection of the research-doctorate programs to be evaluated in each discipline was made in two stages. Programs meeting either of the following criteria[21] were initially nominated for inclusion in the study:

(1) more than a specified number (see below) of research doctorates awarded during the FY1976-78 period or
(2) more than one-third of that specified number of doctorates awarded in FY1979.

---

[20] Geography was among the disciplines covered in the Roose-Andersen study.

[21] In the first three volumes of the committee's study, which pertain to the mathematical and physical sciences, humanities, and engineering, it is mistakenly reported that a third criterion based on results from the Roose-Andersen study was used in the nomination of programs to be included in the assessment. This third criterion, while at one time considered by the committee, was not adopted.

TABLE 1.1 Number of Research-Doctorates Awarded in Social and Behavioral Science Disciplines, FY1976-78

	Source of Data*	
	ETS	NRC
Disciplines Included in the Assessment		
Psychology	6,977	8,868
History	2,511	2,819
Economics	2,323	2,524
Political Science	2,021	2,195
Sociology	1,981	2,069
Anthropology	1,252	1,290
Geography	523	469
Total	17,588	20,234
Disciplines Not Included in the Assessment		
Area Studies	479	333
Public Administration	413	423
Urban Studies	62	247
Other Social and Behavioral Sciences	N/A	694
Total		1,697

*Data on FY1976-78 doctoral awards were derived from two independent sources: Educational Testing Service (ETS), Graduate Programs and Admissions Manual, 1979-81, and the NRC's Survey of Earned Doctorates, 1976-78. Differences in field definitions account for discrepancies between the ETS and NRC data.

In each discipline the specified number of doctorates required for inclusion in the study was determined in such a way that the programs meeting this criterion accounted for at least 90 percent of the doctorates awarded in that discipline during the FY1976-78 period. In the social and behavioral science disciplines the following numbers of FY1976-78 doctoral awards were required to satisfy the first criterion (above):

Anthropology--9 or more doctorates
Economics--12 or more doctorates
Geography--1 or more doctorates
History--11 or more doctorates
Political Science--10 or more doctorates
Psychology--22 or more doctorates
Sociology--9 or more doctorates.

A list of the nominated programs at each institution was then sent to a designated individual (usually the graduate dean) who had been appointed by the university president to serve as study coordinator for the institution. The coordinator was asked to review the list and eliminate any programs no longer offering research doctorates or not belonging in the designated discipline. The coordinator also was given an opportunity to nominate additional programs that he or she believed should be included in the study.[22] Coordinators were asked to restrict their nominations to programs that they considered to be "of uncommon distinction" and that had awarded no fewer than two research-doctorates during the past two years. In order to be eligible for inclusion, of course, programs had to belong in one of the disciplines covered in the study. If the university offered more than one research-doctorate program in a discipline, the coordinator was instructed to provide information on each of them so that these programs could be evaluated separately.

The committee received excellent cooperation from the study coordinators at universities. Of the 243 institutions that were identified as having one or more research-doctorate programs satisfying the criteria (listed earlier) for inclusion in the study, only 7 declined to participate in the study and another 8 failed to provide the program information requested within the three-month period allotted (despite several reminders). None of these 15 institutions had doctoral programs that had received strong or distinguished reputational ratings in prior national studies. Since the information requested had not been provided, the committee decided not to include programs from these institutions in any aspect of the assessment. In each of the seven chapters that follows, a list is given of the universities that met the criteria for inclusion in a particular discipline but that are not represented in the study.

As a result of nominations by institutional coordinators, some programs were added to the original list and others dropped. Table 1.2 reports the final coverage in each of the seven social and behavioral science disciplines. The number of programs evaluated varies considerably by discipline. A total of 150 psychology programs have been included in the study; in geography and anthropology fewer than half this number have been included. Although the final determination of whether a program should be included in the assessment was left in the hands of the institutional coordinator, it is entirely possible that a few programs meeting the criteria for inclusion in the assessment were overlooked by the coordinators. In the chapter that follows, a detailed description is given of each of the measures used in the evaluation of research-doctorate programs in the social and behavioral sciences. The description includes a discussion of the rationale for using the measure, the source from which data for that measure were derived, and any known limitations that would affect the interpretation of the data reported. The committee wishes to emphasize that there are limitations associated with each of the measures and that none of the measures should be regarded as a precise indicator of the quality of a program in educating scientists for careers in research. The reader is strongly urged to consider the descriptive material presented in Chapter II before attempting to interpret the program evaluations reported in subsequent chapters. In presenting a frank discussion of any shortcomings of each measure, the committee's intent is to reduce the possibility of misuse of the results from this assessment of research-doctorate programs.

---

[22] See Appendix A for the specific instructions given to the coordinators.

TABLE 1.2 Number of Programs Evaluated in Each Discipline and the Total FY1976-80 Doctoral Awards from These Programs

Discipline	Programs	FY1976-80 Doctorates*
Anthropology	70	1,960
Economics	93	3,770
Geography	49	762
History	102	3,877
Political Science	83	2,909
Psychology	150	10,582
Sociology	92	3,061
TOTAL	639	26,921

*The data on doctoral awards were provided by the study coordinator at each of the universities covered in the assessment.

II

Methodology

> Quality . . . you know what it is, yet you don't know what it is. But that's self-contradictory. But some things are better than others, that is, they have more quality. But when you try to say what the quality is, apart from the things that have it, it all goes poof! There's nothing to talk about. But if you can't say what Quality is, how do you know what it is, or how do you know that it even exists? If no one knows what it is, then for all practical purposes it doesn't exist at all. But for all practical purposes it really does exist. What else are the grades based on? Why else would people pay fortunes for some things and throw others in the trash pile? Obviously some things are better than others . . . but what's the "betterness"? . . . So round and round you go, spinning mental wheels and nowhere finding anyplace to get traction. What the hell is Quality? What is it?
>
> Robert M. Pirsig
> Zen and the Art of
> Motorcycle Maintenance

Both the planning committee and our own study committee have given careful consideration to the types of measures to be employed in the assessment of research-doctorate programs.[1] The committees recognized that any of the measures that might be used is open to criticism and that no single measure could be expected to provide an entirely satisfactory index of the quality of graduate education. With respect to the use of multiple criteria in educational assessment, one critic has commented:

---

[1] A description of the measures considered may be found in the third chapter of the planning committee's report, along with a discussion of the relative merits of each measure.

> At best each is a partial measure encompassing a fraction of the large concept. On occasion its link to the real [world] is problematic and tenuous. Moreover, each measure [may contain] a load of irrelevant superfluities, "extra baggage" unrelated to the outcomes under study. By the use of a number of such measures, each contributing a different facet of information, we can limit the effect of irrelevancies and develop a more rounded and truer picture of program outcomes.[2]

Although the use of multiple measures alleviates the criticisms directed at a single dimension or measure, it certainly will not satisfy those who believe that the quality of graduate programs cannot be represented by quantitative estimates no matter how many dimensions they may be intended to represent. Furthermore, the usefulness of the assessment is dependent on the validity and reliability of the criteria on which programs are evaluated. The decision concerning which measures to adopt in the study was made primarily on the basis of two factors:

(1) the extent to which a measure was judged to be related to the quality of research-doctorate programs and
(2) the feasibility of compiling reliable data for making national comparisons of programs in particular disciplines.

Only measures that were applicable to a majority of the disciplines to be covered were considered. In reaching a final decision the study committee found the ETS study,[3] in which 27 separate variables were examined, especially helpful, even though it was recognized that many of the measures feasible in institutional self-studies would not be available in a national study. The committee was aided by the many suggestions received from university administrators and others within the academic community.

Although the initial design called for an assessment based on approximately six measures, the committee concluded that it would be highly desirable to expand this effort. A total of 16 measures (listed in Table 2.1) have been utilized in the assessment of research-doctorate programs in economics, political science, psychology, and sociol-

---

[2] C. H. Weiss, Evaluation Research: Methods of Assessing Program Effectiveness, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1972, p. 56.

[3] See M. J. Clark et al. (1976) for a description of these variables.

R6000-14.5

This page is a duplicate of Table 2.1 and may be used as a guide to program measures by placing it beside the tables under examination.

MEASURES COMPILED ON INDIVIDUAL RESEARCH-DOCTORATE PROGRAMS IN THE SOCIAL AND BEHAVIORAL SCIENCES

Program Size[1] (See page 17.)

01 Reported number of faculty members in the program, December 1980.

02 Reported number of program graduates in last five years (July 1975 through June 1980).

03 Reported total number of full-time and part-time graduate students enrolled in the program who intend to earn doctorates, December 1980.

Characteristics of Graduates[2] (See pages 17-20.)

04 Fraction of FY1975-79 program graduates who had received some national fellowship or training grant support during their graduate education.

05 Median number of years from first enrollment in graduate school to receipt of the doctorate--FY1975-79 program graduates.[3]

06 Fraction of FY1975-79 program graduates who at the time they completed requirements for the doctorate reported that they had made definite commitments for postgraduation employment.

07 Fraction of FY1975-79 program graduates who at the time they completed requirements for the doctorate reported that they had made definite commitments for postgraduation employment in Ph.D.-granting universities.

Reputational Survey Results[4] (See pages 20-26.)

08 Mean rating of the scholarly quality of program faculty (scale = 0 to 5).

09 Mean rating of the effectiveness of the program in educating research scholars/scientists (scale = 0 to 3).

10 Mean rating of the improvement in program quality in the last five years (scale = 0 to 2).

11 Mean rating of the evaluators' familiarity with the work of the program's faculty (scale = 0 to 2).

University Library Size[5] (See page 25-26.)

12 Composite index describing the library size in the university in which the program is located, 1979-80 (scale = -3 to +3).

Research Support (See pages 26-27.)

13 Fraction of program faculty members holding research grants from the Alcohol, Drug Abuse, and Mental Health Administration, the National Institutes of Health, or the National Science Foundation at any time during the FY1978-80 period.[6]

14 Total expenditures reported by the university for research and development activities in a specified field, FY1979[7] (in thousands of dollars).

Publication Records[8] (See pages 27-29.)

17 Number of published articles attributed to the program faculty members, 1978-80.

18 Fraction of program faculty members with one or more published articles, 1978-80.

[1] Based on information provided to the committee by the participating universities.

[2] Based on data compiled in the NRC's Survey of Earned Doctorates.

[3] In reporting standardized scores and correlations with other variables, a shorter time-to-Ph.D. is assigned a higher score.

[4] Based on responses to the committee's survey conducted in April 1981.

[5] Based on data compiled by the Association of Research Libraries.

[6] Based on matching faculty names provided by institutional coordinators with the names of research grant awardees from the three federal agencies.

[7] Based on data provided to the National Science Foundation by universities.

[8] Based on data compiled by the Institute for Scientific Information.

TABLE 2.1 Measures Compiled on Individual Research-Doctorate Programs in the Social and Behavioral Sciences

Program Size[1]

01 Reported number of faculty members in the program, December 1980.
02 Reported number of program graduates in last five years (July 1975 through June 1980).
03 Reported total number of full-time and part-time graduate students enrolled in the program who intend to earn doctorates, December 1980.

Characteristics of Graduates[2]

04 Fraction of FY1975-79 program graduates who had received some national fellowship or training grant support during their graduate education.
05 Median number of years from first enrollment in graduate school to receipt of the doctorate--FY1975-79 program graduates.[3]
06 Fraction of FY1975-79 program graduates who at the time they completed requirements for the doctorate reported that they had made definite commitments for postgraduation employment.
07 Fraction of FY1975-79 program graduates who at the time they completed requirements for the doctorate reported that they had made definite commitments for postgraduation employment in Ph.D.-granting universities.

Reputational Survey Results[4]

08 Mean rating of the scholarly quality of program faculty.
09 Mean rating of the effectiveness of the program in educating research scholars/scientists.
10 Mean rating of the improvement in program quality in the last five years.
11 Mean rating of the evaluators' familiarity with the work of the program's faculty.

University Library Size[5]

12 Composite index describing the library size in the university in which the program is located, 1979-80.

Research Support

13 Fraction of program faculty members holding research grants from the Alcohol, Drug Abuse, and Mental Health Administration, the National Institutes of Health, or the National Science Foundation at any time during the FY1978-80 period.[6]
14 Total expenditures (in thousands of dollars) reported by the university for research and development activities in a specified field, FY1979.[7]

Publication Records[8]

17 Number of published articles attributed to the program faculty members, 1978-80.
18 Fraction of program faculty members with one or more published articles, 1978-80.

[1] Based on information provided to the committee by the participating universities.

[2] Based on data compiled in the NRC's Survey of Earned Doctorates.

[3] In reporting standardized scores and correlations with other variables, a shorter time-to-Ph.D. is assigned a higher score.

[4] Based on responses to the committee's survey conducted in April 1981.

[5] Based on data compiled by the Association of Research Libraries.

[6] Based on matching faculty names provided by institutional coordinators with the names of research grant awardees from the three federal agencies.

[7] Based on data provided to the National Science Foundation by universities.

[8] Based on data compiled by the Institute for Scientific Information.

ogy. Fifteen of these were used in evaluating programs in anthropology and geography, and 14 were used in history. (Data on research expenditures are unavailable in each of the latter three disciplines, and data on ADAMHA/NIH/NSF research support of faculty investigators are not applicable to most programs in history.) For nine of the measures data are available describing most, if not all, of the social and behavioral science programs included in the assessment. For five measures the coverage is less complete but encompasses at least a majority of the programs in every discipline. The actual number of programs evaluated on every measure is reported in the second table in each of the next seven chapters.

The 16 measures describe a variety of aspects important to the operation and function of research-doctorate programs--and thus are relevant to the quality and effectiveness of programs in educating scientists for careers in research. However, not all of the measures may be viewed as "global indices of quality." Some, such as those relating to program size, are best characterized as "program descriptors" that, although not dimensions of quality per se, are thought to have a significant influence on the effectiveness of programs. Other measures, such as those relating to university library size and support for research and training, describe some of the resources generally recognized as being important in maintaining a vibrant program in graduate education. Measures derived from surveys of faculty peers or from the publication records of faculty members, on the other hand, have traditionally been regarded as indices of the overall quality of graduate programs. Yet these too are not true measures of quality.

> We often settle for an easy-to-gather statistic, perfectly legitimate for its own limited purposes, and then forget that we haven't measured what we want to talk about. Consider, for instance, the reputation approach of ranking graduate departments: We ask a sample of physics professors (say) which the best physics departments are and then tabulate and report the results. The "best" departments are those that our respondents say are the best. Clearly it is useful to know which are the highly regarded departments in a given field, but prestige (which is what we are measuring here) isn't exactly the same as quality.[4]

To be sure, each of the 16 measures reported in this assessment has its own set of limitations. In the sections that follow an explanation is provided of how each measure has been derived and its particular limitations as a descriptor of research-doctorate programs.

---

[4] John Shelton Reed, "How Not to Measure What a University Does," The Chronicle of Higher Education, Vol. 22, No. 12, May 11, 1981, p. 56.

PROGRAM SIZE

Information was collected from the study coordinators at each university on the names and ranks of program faculty, doctoral student enrollment, and number of Ph.D. graduates in each of the past five years (FY1976-80). Each coordinator was instructed to include on the faculty list those individuals who, as of December 1, 1980, held academic appointments (typically at the rank of assistant, associate, and full professor) and who participated significantly in doctoral education. Emeritus and adjunct members generally were not to be included. Measure 01 represents the number of faculty identified in a program. Measure 02 is the reported number of graduates who earned Ph.D. or equivalent research doctorates in a program during the period from July 1, 1975, through June 30, 1980. Measure 03 represents the total number of full-time and part-time students reported to be enrolled in a program in the fall of 1980, who intended to earn research doctorates. All three of these measures describe different aspects of program size. In previous studies program size has been shown to be highly correlated with the reputational ratings of a program, and this relationship is examined in detail in this report. It should be noted that since the information was provided by the institutions participating in the study, the data may be influenced by the subjective decisions made by the individuals completing the forms. For example, some institutional coordinators may be far less restrictive than others in deciding who should be included on the list of program faculty. To minimize variation in interpretation, detailed instructions were provided to those filling out the forms.[5] Measure 03 is of particular concern in this regard since the coordinators at some institutions may not have known how many of the students currently enrolled in graduate study intended to earn doctoral degrees.

CHARACTERISTICS OF GRADUATES

One of the most meaningful measures of the success of a research-doctorate program is the performance of its graduates. How many go on to lead productive careers in research and/or teaching? Unfortunately, reliable information on the subsequent employment and career achievements of the graduates of individual programs is not available. In the absence of this directly relevant information, the committee has relied on four indirect measures derived from data compiled in the NRC's Survey of Earned Doctorates.[6] Although each measure has serious limitations (described below), the committee believes it more desirable to include this information than not to include data about program graduates.

---

[5] A copy of the survey form with the instructions sent to study coordinators is included in Appendix A.

[6] A copy of the questionnaire used in this survey is found in Appendix B.

In identifying program graduates who had received their doctorates in the previous five years (FY1975-79),[7] the faculty lists furnished by the study coordinators at universities were compared with the names of dissertation advisers (available from the NRC survey). The latter source contains records for virtually all individuals who have earned research doctorates from U.S. universities since 1920. The institution, year, and specialty field of Ph.D. recipients were also used in determining the identity of program graduates. It is estimated that this matching process provided information on the graduate training and employment plans of more than 90 percent of the FY1975-79 graduates from the social and behavioral science programs. In the calculation of each of the four measures derived from the NRC survey, program data are reported only if the survey information is available on at least 10 graduates. Consequently, in a discipline with smaller programs--e.g., geography--slightly less than three-fourths of the programs are included in these measures, whereas nearly all of the economics, history, and psychology programs are included.

Measure 04 constitutes the fraction of FY1975-79 graduates of a program who had received at least some national fellowship support, including National Institutes of Health fellowships or traineeships, National Science Foundation fellowships, other federal fellowships, Woodrow Wilson fellowships, or fellowships/traineeships from other U.S. national organizations. One might expect the more selective programs to have a greater proportion of students with national fellowship support--especially "portable fellowships." Although the committee considered alternative measures of student ability (e.g., Graduate Record Examination scores, undergraduate grade point averages), reliable information of this sort was unavailable for a national assessment. It should be noted that the relevance of the fellowship measure varies considerably among disciplines. In the biomedical sciences a substantial fraction of the graduate students are supported by training grants and fellowships; in the social and behavioral sciences the majority are supported by teaching assistantships and research assistantships.

Measure 05 is the median number of years elapsed from the time program graduates first enrolled in graduate school to the time they received their doctoral degrees. For purposes of analysis the committee has adopted the conventional wisdom that the most talented students are likely to earn their doctoral degrees in the shortest periods of time--hence, the shorter the median time-to-Ph.D., the higher the standardized score that is assigned. Although this measure has frequently been employed in social science research as a proxy for student ability, one must regard its use here with some skepticism. It is quite possible that the length of time it takes a student to complete requirements for a doctorate may be significantly affected by the explicit or implicit policies of a university or department. For example, in certain cases a short time-to-Ph.D. may be indicative of less stringent requirements for the degree. Furthermore, previous studies have demonstrated that women and members of minority groups, for reasons having nothing to do with their abilities, are more likely than male Caucasians to interrupt their graduate education or to be enrolled on a part-time basis.[8] As a consequence, the median time-to-Ph.D. may be longer for programs with larger fractions of women and minority students.

---

[7] Survey data for the FY1980 Ph.D. recipients had not yet been compiled at the time this assessment was undertaken.

Measure 06 represents the fraction of FY1975-79 program graduates who reported at the time they had completed requirements for the doctorate that they had signed contracts or made firm commitments for postgraduation employment (including postdoctoral appointments as well as other positions in the academic or nonacademic sectors) and who provided the names of their prospective employers. Although this measure is likely to vary discipline by discipline according to the availability of employment opportunities, a program's standing relative to other programs in the same discipline should not be affected by this variation. In theory, the graduates with the greatest promise should have the easiest time finding jobs. However, the measure is also influenced by a variety of other factors, such as personal job preferences and restrictions in geographic mobility, that are unrelated to the ability of the individual. It also should be noted parenthetically that unemployment rates for doctoral recipients are quite low and that nearly all of the graduates seeking jobs find positions soon after completing their doctoral programs.[9] Furthermore, first employment after graduation is by no means a measure of career achievement, which is what one would like to have if reliable data were available.

Measure 07, a variant of measure 06, constitutes the fraction of FY1975-79 program graduates who indicated that they had made firm commitments for employment in Ph.D.-granting universities and who provided the names of their prospective employers. This measure may be presumed to be an indication of the fraction of graduates likely to pursue careers in academic research, although there is no evidence concerning how many of them remain in academic research in the long term. In many social and behavioral science disciplines the path from Ph.D. to junior faculty has traditionally been regarded as the road of success for the growth and development of research talent. The committee is well aware, of course, that other paths, such as employment in the major laboratories of industry and government, provide equally attractive opportunities for growth. Indeed, in recent years increasing numbers

---

[8] For a detailed analysis of this subject, see Dorothy M. Gilford and Joan Snyder, Women and Minority Ph.D.'s in the 1970's: A Data Book, National Academy of Sciences, Washington, D.C., 1977.

[9] For new Ph.D. recipients in science and engineering the unemployment rate has been less than 2 percent (see National Research Council, Postdoctoral Appointments and Disappointments, National Academy Press, Washington, D.C., 1981, p. 313).

TABLE 2.2 Percentage of FY1975-79 Doctoral Recipients with Definite Commitments for Employment Outside the Academic Sector*

Anthropology	16
Economics	32
Geography	18
History	22
Political Science	19
Psychology	47
Sociology	13

*Percentages are based on responses to the NRC's Survey of Earned Doctorates by those who indicated that they had made firm commitments for postgraduation employment and who provided the names of their prospective employers. These percentages may be considered to be lower-bound estimates of the actual percentages of doctoral recipients employed outside the academic sector.

of graduates are entering the nonacademic sectors. Unfortunately, the data compiled from the NRC's Survey of Earned Doctorates do not enable one to distinguish between employment in the top-flight laboratories of industry and government and employment in other areas of the nonacademic sectors. Accordingly, the committee has relied on a measure that reflects only the academic side and views this measure as a useful and interesting program characteristic rather than a dimension of quality. In the social and behavioral science disciplines, in which less than one-third of the graduates with definite employment plans intend to take jobs outside the academic environs (see Table 2.2), this limitation is of lesser concern than it is in the engineering and physical science disciplines.

The inclusion of measures 06 and 07 in this assessment has been an issue much debated by members of the committee; the strenuous objections by three committee members regarding the use of these measures are expressed in the Minority Statement, which follows Chapter X.

REPUTATIONAL SURVEY RESULTS

In April 1981 survey forms were mailed to a total of 1,770 faculty members in anthropology, economics, history, political science, psychology, and sociology. Survey forms were mailed to 150 geography faculty in September 1981. The evaluators were selected from the faculty lists furnished by the study coordinators at the 228 universities covered in the assessment. These evaluators constituted approximately 13 percent of the total faculty population--14,898 faculty members--in the social and behavioral science programs being evaluated (see Table 2.3). The survey sample was chosen on the basis of the number of faculty in a particular program and the number of doctorates awarded in the previous five years (FY1976-80)--with the stipulation that at least one evaluator was selected from every program covered in the assessment. In selecting the sample each faculty rank was represented in proportion to the total number of individuals holding that rank, and preference was given to those faculty members whom the study coordinators had nominated to serve as evaluators. As shown in Table 2.3, 1,686 individuals --88 percent of the survey sample in the social and behavioral sciences --had been recommended by study coordinators.[10]

Each evaluator was asked to consider a stratified random sample of no more than 50 research-doctorate programs in his or her discipline--with programs stratified by the number of faculty members associated with each program. Every program was included on 150 survey forms. The set of programs to be evaluated appeared on each survey form in random sequence, preceded by an alphabetized list of all programs in that discipline that were being included in the study. No evaluator was asked to consider a program at his or her own institution. Ninety percent of the survey sample group were provided the names of faculty members in each of the programs to be evaluated, along with data on the total number of doctorates awarded in the last five years.[11] The inclusion of this information represents a significant departure from the procedures used in earlier reputational assessments. For purposes of comparison with previous studies, 10 percent (randomly selected in each discipline) were not furnished any information other than the names of the programs.

The survey items were adapted from the form used in the Roose-Andersen study. Prior to mailing, the instrument was pretested using a small sample of faculty members in chemistry and psychology. As a result, two significant improvements were made in the original survey design. A question was added on the extent to which the evaluator was familiar with the work of the faculty in each program. Responses to this question, reported as measure 11, provide some insight into the relationship between faculty recognition and the reputational standing of a program.[12] Also added was a question on the evaluator's field of specialization--thereby making it possible to compare program evaluations in different specialty areas within a particular discipline.

A total of 1,195 faculty members in the social and behavioral sciences--62 percent of those asked to participate--completed and returned survey forms (see Table 2.3). Two factors probably have contributed to this response rate being approximately 17 percentage points below the rates reported in the Cartter and Roose-Andersen studies. First, because of the considerable expense of printing individualized survey forms (each 25-30 pages), second copies were not sent to sample members

---

[10] A detailed analysis of the survey participants in each discipline is given in subsequent chapters.

[11] This information was furnished to the committee by the study coordinators at the universities participating in the study.

[12] Evidence of the strength of the relationship is provided by correlations presented in Chapters III-IX, and an analysis of the relationship is provided in Chapter X.

TABLE 2.3 Survey Response by Discipline and Characteristics of Evaluator

	Total Program Faculty	Survey Sample		
		Total	Respondents	
	N	N	N	%
Discipline of Evaluator				
Anthropology	1,181	210	125	60
Economics	2,163	279	185	66
Geography	640	150	106	71
History	2,820	306	166	54
Political Science	1,880	249	152	61
Psychology	4,299	450	280	62
Sociology	1,915	276	181	66
Faculty Rank				
Professor	7,629	1,000	628	63
Associate Professor	4,014	611	383	63
Assistant Professor	2,984	299	179	60
Other	271	10	5	50
Evaluator Selection				
Nominated by Institution	4,543	1,686	1,082	64
Other	10,355	234	113	48
Survey Form				
With Faculty Names	N/A*	1,728	1,072	62
Without Names	N/A*	192	123	64
Total All Fields	14,898	1,920	1,195	62

*Not applicable.

not responding to the first mailing[13]--as was done in the Cartter and Roose-Andersen efforts. Second, it is quite apparent that within the academic community there has been a growing dissatisfaction in recent years with educational assessments based on reputational measures. Indeed, this dissatisfaction was an important factor in the Conference Board's decision to undertake a multidimensional assessment, and some faculty members included in the sample made known to the committee their strong objections to the reputational survey.

As can be seen in Table 2.3, there is some variation in the response rates in the seven social and behavioral science disciplines. Of particular interest is the relatively high rate of response from geographers and the low rate from historians.[14] The high response rate in geography may be attributable, in part, to the fact that geography was added later to the original list of disciplines to be included in the assessment and consequently the timing and circumstances relating to the survey activity in this discipline were somewhat different. It is not surprising to find that the evaluators nominated by study coordinators responded more often than did those who had been selected at random. No appreciable differences were found among the response rates of assistant, associate, and full professors, nor between the rates of those evaluators who were furnished the abbreviated survey form (without lists of program faculty) and those who were given the longer version.

Each program was considered by an average of approximately 90 survey respondents from other programs in the same discipline. The evaluators were asked to judge programs in terms of scholarly quality of program faculty, effectiveness of the program in educating research scholars/scientists, and change in program quality in the last five years.[15] The mean ratings of a program on these three survey items constitute measures 08, 09, and 10. Evaluators were also asked to indicate the extent to which they were familiar with the work of the program faculty. The average of responses to this item constitutes measure 11.

In making judgments about the quality of faculty, evaluators were instructed to consider the scholarly competence and achievements of the individuals. The ratings were furnished on the following scale:

5	Distinguished
4	Strong
3	Good
2	Adequate
1	Marginal
0	Not sufficient for doctoral education
X	Don't know well enough to evaluate

---

[13] A follow-up letter was sent to those not responding to the first mailing, and a second copy was distributed to those few evaluators who specifically requested another form.

[14] To compare the response rates obtained in the earlier surveys, see Roose and Andersen, Table 28, p. 29.

[15] A copy of the survey instrument with its instructions is included in Appendix C.

In assessing the effectiveness of a program, evaluators were asked to consider the accessibility of faculty, the curricula, the instructional and research facilities, the quality of the graduate students, the performance of graduates, and other factors that contribute to a program's effectiveness. This measure was rated accordingly:

3 Extremely effective
2 Reasonably effective
1 Minimally effective
0 Not effective
X Don't know well enough to evaluate

Evaluators were instructed to assess change in program quality on the basis of whether there has been improvement in the last five years in both the scholarly quality of faculty and the effectiveness in educating research scholars/scientists. The following alternatives were provided:

2 Better than five years ago
1 Little or no change in last five years
0 Poorer than five years ago
X Don't know well enough to evaluate

Evaluators were asked to indicate their familiarity with the work of the program faculty according to the following scale:

2 Considerable familiarity
1 Some familiarity
0 Little or no familiarity

In the computation of mean ratings on measures 08, 09, and 10, the "don't know" responses were ignored. An average program rating based on fewer than 15 responses (excluding the "don't know" responses) is not reported.

Measures 08, 09, and 10 are subject to many of the same criticisms that have been directed at previous reputational surveys. Although care has been taken to improve the sampling design and to provide evaluators with some essential information about each program, the survey results merely reflect a consensus of faculty opinions. As discussed in Chapter I, these opinions may well be based on out-of-date information or be influenced by a variety of factors unrelated to the quality of the program. In Chapter X a number of factors that may possibly affect the survey results are examined. In addition to these limitations, it should be pointed out that evaluators, on the average, were unfamiliar with almost one-third of the programs they were asked to consider.[16] As might be expected, the smaller and less prestigious programs were not as well known, and for this reason one might have less confidence in the average ratings of these programs. For all four survey measures, standard errors of the mean ratings are reported; they tend to be larger for the lesser known programs. The frequency of response to each of the survey items is discussed in Chapter X.

---

[16] See Table 10.6 in Chapter X.

Two additional comments should be made regarding the survey activity. First, it should be emphasized that the ratings derived from the survey reflect a program's standing relative to other programs in the same discipline and provide no basis for making cross-disciplinary comparisons. For example, the fact that a much larger number of psychology programs received "distinguished" ratings on measure 08 than did anthropology programs indicates nothing about the relative quality of the faculty in these two disciplines. It may depend, in part, on the total numbers of programs evaluated in these disciplines; in the survey instructions it was suggested to evaluators that no more than 10 percent of the programs listed be designated as "distinguished." Nor is it advisable to compare the rating of a program in one discipline with that of a program in another discipline because the ratings are based on the opinions of different groups of evaluators who were asked to judge entirely different sets of programs. Second, early in the committee's deliberations a decision was made to supplement the ratings obtained from faculty members with ratings from evaluators who hold research-oriented positions in institutions outside the academic sector. These institutions include industrial research laboratories, government research laboratories, and a variety of other research establishments. Over the past 10 years increasing numbers of doctorate recipients have taken positions outside the academic setting. The extensive involvement of these graduates in nonacademic employment is reflected in the percentages reported in Table 2.2: An average of 31 percent of the recent graduates in the social and behavioral science disciplines who had definite employment plans indicated that they planned to take positions in nonacademic settings. Data from another NRC survey suggest that the actual fraction employed outside academia may be significantly higher. The committee recognized that the inclusion of nonacademic evaluators would furnish information valuable for assessing nontraditional dimensions of doctoral education and would provide an important new measure not assessed in earlier studies. Results from a survey of this group would provide an interesting comparison with the results obtained from the survey of faculty members. A concentrated effort was made to obtain supplemental funding for adding nonacademic evaluators in selected disciplines to the survey sample, but this effort was unsuccessful. The committee nevertheless remains convinced of the importance of including evaluators from nonacademic research institutions. These institutions are likely to employ increasing fractions of graduates in many disciplines, and it is urged that this group not be overlooked in future assessments of graduate programs.

UNIVERSITY LIBRARY SIZE

The university library holdings are generally regarded as an important resource for students in graduate (and undergraduate) education. The Association of Research Libraries (ARL) has compiled data from its academic member institutions and developed a composite measure of a university library's size relative to those of other ARL members. The ARL Library Index, as it is called, is based on 10 characteristics: volumes held, volumes added (gross), microform units held, current serials received, expenditures for library materials, expenditures for binding, total salary and wage expenditures, other operating expenditures, number of professional staff, and number of nonprofessional staff.[17] The 1979-80 index, which constitutes measure 12, is available for 89 of the 228 universities included in the assessment. (These 89 tend to be among the largest institutions.) The limited coverage of this measure is a major shortcoming. It should be noted that the ARL index is a composite description of library size and not a qualitative evaluation of the collections, services, or operations of the library. Also, it is a measure of aggregate size and does not take into account the library holdings in a particular department or discipline. Finally, although universities with more than one campus were instructed to include figures for the main campus only, some in fact may have reported library size for the entire university system. Whether this misreporting occurred is not known.

RESEARCH SUPPORT

Using computerized data files[18] provided by the National Science Foundation (NSF) and the National Institutes of Health (NIH), it was possible to identify which faculty members in each program had been awarded research grants during the FY1978-80 period by either of these agencies or by the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA). The fraction of faculty members in a program who had received any research grants from these agencies during this three-year period constitutes measure 13. Since these awards have been made on the basis of peer judgment, this measure is considered to reflect the perceived research competence of program faculty. However, it should be noted that significant amounts of support for research in the social and behavioral sciences come from other federal agencies and from private foundations and other nonfederal sources as well, though it was not feasible to compile data from these other sources. Perhaps as many as half of the faculty investigators in the social and behavioral sciences derive their support from nonfederal sponsors. It is estimated[19] that 22 percent of the university faculty members in these disciplines who received federal R&D funding obtained their support from NIH, another 20 percent from NSF, and approximately 13 percent from ADAMHA. The remaining 45 percent received support from a variety of other federal agencies. It also should be pointed out that only those faculty members who served as principal investigators or coinvestigators are counted in the computation of this measure. As mentioned earlier, since very few faculty members in history programs receive research support from NIH, NSF, or ADAMHA, measure 13 was not included in the assessment of programs in this discipline.

---

[17] See Appendix D for a description of the calculation of this index.

[18] A description of these files is provided in Appendix E.

[19] Based on special tabulations of data from the NRC's Survey of Doctorate Recipients, 1979.

Measure 14 describes the total FY1979 expenditures by a university for R&D in a particular discipline. These data have been furnished to the NSF[20] by universities and include expenditures of funds from both federal and nonfederal sources. If an institution has more than one program being evaluated in the same discipline, the aggregate university expenditures for research in that discipline are reported for each of the programs. In each discipline data are recorded for the 100 universities with the largest R&D expenditures. As already mentioned, such data are not available for programs in anthropology, geography, and history.

This measure has several limitations related to the procedures by which the data have been collected. The committee notes that there is evidence within the source document[21] that universities use different practices for categorizing and reporting expenditures. Apparently, institutional support of research, industrial support of research, and expenditure of indirect costs are reported by different institutions in different categories (or not reported at all). Since measure 14 is based on total expenditures from all sources, the data used here are perturbed only when these types of expenditures are not subsumed under any reporting category. In contrast with measure 13, measure 14 is not reported on a scale relative to the number of faculty members and thus reflects the overall level of research activity at an institution in a particular discipline. Although research grants in the sciences and engineering provide some support for graduate students as well, these measures should not be confused with measure 04, which pertains to fellowships and training grants.

PUBLICATION RECORDS

Data from the 1978, 1979, and 1980 Social Science Citation Index[22] have been compiled on published articles by faculty members in anthropology, economics, geography, history, political science, psychology, and sociology. Publication counts were associated with research-doctorate programs by matching authors' names with the names of individual program faculty members (provided by the universities). To differentiate authors who have the same last name and first initial,[23] the matching process took into account the institutional affiliation of the author and the discipline of the journal in which the article appeared. In the case of a coauthored article, each author is fully credited with that article.

---

[20] A copy of the survey instrument used to collect these data appears in Appendix E.

[21] National Science Foundation, Academic Science: R and D Funds, Fiscal Year 1979, U.S. Government Printing Office, Washington, D.C., NSF 81-301, 1981.

[22] The publication data have been compiled and provided for the committee's use by the Institute for Scientific Information.

Two measures have been derived from publication records: measure 17--the total number of articles published in the 1978-80 period that have been identified with individual faculty members in a research-doctorate program; and measure 18--the fraction of program faculty members with one or more published articles during this three-year period. Since both of these publication measures are based on individual name matches with program faculty, they are quite different from measures 15 and 16, which are presented in the committee's reports on research-doctorate programs in the mathematical and physical sciences, engineering, and biological sciences.[24] The latter two measures are associated with programs on the basis of the discipline of the journal in which an article appeared and the institution with which the author was affiliated. Therefore, articles by program faculty members, students, research personnel, and even members of other programs/departments in the university who publish in those journals are included. Measures 17 and 18 reported here reflect only articles authored by program faculty members.

Although physical and biological scientists publish a large share of their research in the form of articles, this is not as often the case for social or behavioral scientists. Thus, measure 17--confined to articles published in the 1978-80 period in journals covered by the Social Science Citation Index--tends to overestimate the contributions of faculty members who publish articles and to underestimate the contributions of those who publish in books. To the extent that the former more often do experimental and quantitative research and that the latter do qualitative, theoretical, and historical research, programs emphasizing experimental and quantitative orientations are likely to receive higher counts on this measure. The significance of book publication in the social and behavioral sciences should not be overlooked. A recently published list[25] of the most frequently cited authors in the social and behavioral sciences and their most frequently cited works suggests that books are of major significance in these disciplines.

---

[23] The full names of individual authors are not available from the Social Science Citation Index.

[24] Data on measures 15 and 16 are also available for research-doctorate programs in psychology and are presented in Appendix J.

[25] E. Garfield, "The 100 Articles Most Cited by Social Scientists, 1969-77," Current Contents: Social and Behavioral Sciences, #32, August 7, 1978; and E. Garfield, "The 100 Books Most Cited by Social Scientists, 1969-77," Current Contents: Social and Behavioral Sciences, #37, September 11, 1978.

Readers should also be aware that measure 17 does not take into account the different sizes of programs. Thus, programs with larger faculties may appear to be more productive than those with smaller faculties. Since measure 17 reflects the total number of published articles by individual faculty members in a program, the average number of articles _per faculty member_ may be derived by dividing measure 17 by the number of faculty members (measure 01). Measure 18--the _fraction_ of faculty members with at least one published article during this three-year period--has been corrected for the program faculty size but does not reflect the rate at which individual members have written articles.

Since the data are confined to the years between 1978 and 1980 and were compiled by author's name and institutional affiliation, they do not take into account institutional mobility of authors during this three-year span. Thus, faculty members who have moved from one institution to another during this span are not credited with those articles for which the author's affiliation is his or her former institution.

Procedures for allocating credit for multiauthored papers must also be considered in assessing measures 17 and 18. Equal weight has been assigned to the program affiliations of all authors of such papers. Thus, these measures tend to overestimate the contributions of faculty members given to collaborative publications. It should also be noted that the _Social Science Citation Index_ does not completely cover all journals in which social and behavioral scientists publish. For example, papers by psychologists working in the neurosciences may not be counted since many neuroscience journals do not appear in the _Social Science Citation Index_.[26] The same may be true for anthropologists, historians, and sociologists who tend to publish results of their research in traditionally humanistic journals not covered by the _Social Science Citation Index_. Finally, neither measure 17 or measure 18 provides any indication of the impact or influence of the articles written by program faculty members. Although publication productivity and the impact of published articles tend to be correlated, previous investigations[27] indicates that they are quite different variables. Citation counts, had it been feasible to compile them, would have complemented measures 17 and 18 and been a highly desirable measure in assessing the publication records of program faculty measures.

---

[26] For a list of journals covered by the _Social Science Citation Index_, see Appendix F.

[27] J. R. Cole and S. Cole, "Measuring the Quality of Sociological Reseach: Problems in the Use of the Science Citation Index," _American Sociologist_, Vol. 6, No. 1, February 1971, pp. 23-28.

ANALYSIS AND PRESENTATION OF THE DATA

The next seven chapters present all of the information that has been compiled on individual research-doctorate programs in anthropology, economics, geography, history, political science, psychology, and sociology. Each chapter follows a similar format, designed to assist the reader in the interpretation of program data. The first table in each chapter provides a list of the programs evaluated in a discipline --including the names of the universities and departments or academic units in which programs reside--along with the full set of data compiled for individual programs. Programs are listed alphabetically according to name of institution, and both raw and standardized values are given for all measures. For the reader's convenience an insert of information from Table 2.1 is provided that identifies each of the 16 measures reported in the table and indicates the raw scale used in reporting values for a particular measure. Standardized values, converted from raw values to have a mean of 50 and a standard deviation of 10,[28] are computed for every measure so that comparisons can easily be made of a program's relative standing on different measures. Thus, a standardized value of 30 corresponds with a raw value that is two standard deviations below the mean for that measure, and a standardized value of 70 represents a raw value two standard deviations above the mean. While the reporting of values in standardized form is convenient for comparing a particular program's standing on different measures, it may be misleading in interpreting actual differences in the values reported for two or more programs--especially when the distribution of the measure being examined is highly skewed. For example, the numbers of published articles (measure 17) associated with four psychology programs are reported in Table 3.1 as follows:

Program	Raw Value	Standardized Value
A	2	37
B	5	38
C	27	41
D	32	42

Although programs C and D have many times the number of articles as have programs A and B, the differences reported on a standardized scale appear to be small. Thus, the reader is urged to take note of the raw values before attempting to interpret differences in the standardized values given for two or more programs.

The initial table in each chapter also presents estimated standard errors of mean ratings derived from the four survey items (measures 08-11). A standard error is an estimated standard deviation of the sample mean rating and may be used to assess the stability of a mean rating reported for a particular program.[29] For example, one may assert (with .95 confidence) that the population mean rating would lie within two standard errors of the sample mean rating reported in this assessment.

---

[28] The conversion was made from the precise raw value rather than from the rounded value reported for each program. Thus, two programs may have the same reported raw value for a particular measure but different standardized values.

No attempt has been made to establish a composite ranking of programs in a discipline. Indeed, the committee is convinced that no single measure adequately reflects the quality of a research-doctorate program and wishes to emphasize the importance of viewing individual programs from the perspective of multiple indices or dimensions.

The second table in each chapter presents summary statistics (i.e., number of programs evaluated, mean, standard deviation, and decile values) for each of the program measures.[30] The reader should find these statistics helpful in interpreting the data reported on individual programs. Next is a table of the intercorrelations among the various measures for that discipline. This table should be of particular interest to those desiring information about the interrelations of the various measures.

The remainder of each chapter is devoted to an examination of results from the reputational survey. Included are an analysis of the characteristics of survey participants and graphical portrayals of the relationship of the mean rating of scholarly quality of faculty (measure 08) with the number of faculty (measure 01) and the relationship of the mean rating of program effectiveness (measure 09) with the number of graduates (measure 02). A frequently mentioned criticism of the Roose-Andersen and Cartter studies is that small but distinguished programs have been penalized in the reputational ratings because they are not as highly visible as larger programs of comparable quality. The comparisons of survey ratings with measures of program size are presented as the first two figures in each chapter and provide evidence about the number of small programs in each discipline that have received high reputational ratings. Since in each case the reputational rating is more highly correlated with the square root of program size than with the size measure itself, measures 01 and 02 are plotted on a square root scale.[31] To assist the reader in interpreting results of the survey evaluations, each chapter concludes with a graphical presentation of the mean rating for every program of the scholarly quality of faculty (measure 08) and an associated "confidence interval" of 1.5 standard errors. In comparing the mean ratings of two programs, if their reported confidence intervals of 1.5 standard errors do not overlap, one may safely conclude that the program ratings are significantly different (at the .05 level of significance)--i.e., the observed difference in mean ratings is too large to be plausibly attributable to sampling error.[32]

---

[29] The standard error estimate has been computed by dividing the standard deviation of a program's ratings by the square root of the number of ratings. For a more extensive discussion of this topic, see Fred N. Kerlinger, Foundations of Behavioral Research, Holt, Reinhart, and Winston, Inc., New York, 1973, Chapter 12. Readers should note that the estimate is a measure of the variation in response and by no means includes all possible sources of error.

[30] Standardized scores have been computed from precise values of the mean and standard deviations of each measure and not the rounded values reported in the second table in each of the following chapters.

[31] For a general discussion of transforming variables to achieve linear fits, see John W. Tukey, Exploring Data Analysis, Addison-Wesley, Reading, Massachusetts, 1977.

The final chapter of this report gives an overview of the evaluation process in the seven social and behavioral science disciplines and includes a summary of general findings. Particular attention is given to some of the extraneous factors that may influence program ratings of individual evaluators and thereby distort the survey results. The chapter concludes with a number of specific suggestions for improving future assessments of research-doctorate programs.

---

[32] This rule for comparing nonoverlapping intervals is valid as long as the ratio of the two estimated standard errors does not exceed 2.41. (The exact statistical significance of this criterion then lies between .050 and .034.) Inspection of the standard errors reported in each discipline shows that for programs with mean ratings differing by less than 1.0 (on measure 08), the standard error of one mean very rarely exceeds twice the standard error of another.

III

Anthropology Programs

In this chapter 70 research-doctorate programs in anthropology are assessed. These programs, according to the information supplied by their universities, have accounted for 1,960 doctoral degrees awarded during the FY1976-80 period--approximately 93 percent of the aggregate number of anthropology and archaeology doctorates earned from U.S. universities in this five-year span.[1] On the average, 51 full-time and part-time students intending to earn doctorates were enrolled in a program in December 1980, with an average faculty size of 17 members.[2] Nine programs were initiated since 1970, and no two programs are located in the same university. All of the 70 institutions initially identified as meeting the criteria[3] for inclusion in the assessment in anthropology are represented here.

Before examining individual program results presented in Table 3.1, the reader is urged to refer to Chapter II, in which each of the 16 measures used in the assessment is discussed. Summary statistics describing every measure are given in Table 3.2. For eight of the measures, data are reported for at least 64 of the 70 anthropology programs. For measures 04-07, which pertain to characteristics of the program graduates, data are presented for all but 10 of the programs; the others had too few graduates on which to base statistics.[4] For measure 12, a composite index of the size of a university library, data are available for 60 programs. The programs not evaluated on this measure are typically smaller--in terms of faculty size and graduate student enrollment--than other anthropology programs. Were data on this measure available for all 70 programs, it is likely that the reported mean would be appreciably lower (and that some of the correlations of this measure with others would be higher). As mentioned in the previous chapter, data on total university expenditures for research (measure 14) are not available in anthropology. With respect to the fraction of faculty with research grants from the Alcohol, Drug Abuse, and Mental Health Administration, the National Institutes of Health, or the National Science Foundation (measure 13) and the fraction of faculty with at least one published article (measure 18), data are reported for 59 anthropology programs.[5]

---

[1] Data from the NRC's Survey of Earned Doctorates indicate that 1,965 research doctorates in anthropology and 137 in archaeology were awarded by U.S. universities between FY1976 and FY1980.

[2] See the reported means for measures 03 and 01 in Table 3.2.

[3] As mentioned in Chapter I, the primary criterion for inclusion was that a university had awarded at least 9 doctorates in anthropology during the FY1976-78 period.

[4] As mentioned in Chapter II, data for measures 04-07 are not reported if they are based on the survey responses of fewer than 10 FY1975-79 program graduates.

Intercorrelations among the 15 measures (Pearson product-moment coefficients) are given in Table 3.3. Of particular note are the high positive correlations of the measures of program size (01-03) with reputational survey ratings (08, 09) and the total number of 1978-80 articles by program faculty (measure 17). Figure 3.1 illustrates the relation between the mean rating of the scholarly quality of faculty (measure 08) and the number of faculty members (measure 01) for each of 70 programs in anthropology. Figure 3.2 plots the mean rating of program effectiveness (measure 09) against the total number of FY1976-80 program graduates (measure 02). In both figures there is a significant positive correlation between program size and reputational rating.

Table 3.4 describes the 125 faculty members who participated in the evaluation of anthropology programs. These individuals constituted 60 percent of those asked to respond to the survey in this discipline and 11 percent of the faculty population in the 70 research-doctorate programs being evaluated.[6] A majority of the survey participants were cultural or physical anthropologists; 22 percent were archaeologists. Two-thirds of these individuals had earned their highest degree prior to 1970, and a majority held the rank of full professor.

To assist the reader in interpreting results of the survey evaluations, estimated standard errors have been computed for mean ratings of the scholarly quality of faculty in 70 anthropology programs (and are given in Table 3.1). For each program the mean rating and an associated "confidence interval" of 1.5 standard errors are illustrated in Figure 3.3 (listed in order of highest to lowest mean rating). In comparing two programs, if their confidence intervals do not overlap, one may conclude that there is a significant difference in their mean ratings at a .05 level of significance.[7] From this figure it is also apparent that one should have somewhat more confidence in the accuracy of the mean ratings of higher-rated programs than lower-rated programs. This generalization results primarily from the fact that evaluators are not as likely to be familiar with the less prestigious programs, and consequently the mean ratings of these programs are usually based on fewer survey responses.

---

[5] Data for measures 13 and 18 are not presented for any programs that had fewer than 10 faculty members.

[6] See Table 2.3 in Chapter II.

[7] See pp. 30-32 for a discussion of the interpretation of mean ratings and associated confidence intervals.

TABLE 3.1 Program Measures (Raw and Standardized Values) in Anthropology

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
001.	American University	10	26	30	.35	8.0	.60	.20
	Anthropology	*41*	*49*	*44*	*44*	*52*	*50*	*44*
002.	Arizona State University-Tempe	20	14	108	.44	7.9	.60	.33
	Anthropology	*54*	*42*	*67*	*48*	*53*	*50*	*55*
003.	Arizona, University of-Tucson	33	41	90	.30	9.0	.76	.49
	Anthropology	*71*	*58*	*62*	*42*	*44*	*63*	*67*
004.	Boston University	10	12	32	NA	NA	NA	NA
	*Anthropology**	*41*	*41*	*44*				
005.	Brandeis University	10	13	19	1.00	9.5	.50	.08
	Anthropology	*41*	*41*	*40*	*75*	*40*	*41*	*34*
006.	Brown University	13	17	47	.47	8.3	.50	.14
	Anthropology	*45*	*44*	*49*	*49*	*50*	*41*	*39*
007.	Bryn Mawr College	9	15	15	NA	7.2	NA	NA
	Anthropology	*40*	*42*	*39*		*59*		
008.	CUNY-Graduate School	33	27	85	.33	9.3	.46	.18
	Anthropology	*71*	*49*	*60*	*43*	*41*	*38*	*42*
009.	California, University of-Berkeley	32	96	118	.68	7.6	.74	.39
	Anthropology	*69*	*90*	*70*	*60*	*55*	*62*	*59*
010.	California, University of-Davis	19	29	25	.60	9.0	.64	.12
	Anthropology	*53*	*51*	*42*	*56*	*44*	*53*	*37*
011.	California, University of-Irvine	20	28	40	.46	6.4	.46	.17
	Social Relations/ Comparative Culture	*54*	*50*	*47*	*49*	*66*	*38*	*41*
012.	California, University of-Los Angeles	34	65	148	.48	8.8	.57	.25
	Anthropology	*72*	*72*	*79*	*50*	*46*	*47*	*48*
013.	California, University of-Riverside	9	22	37	.50	7.1	.75	.25
	Anthropology	*40*	*47*	*46*	*51*	*59*	*63*	*48*
014.	California, University of-San Diego	12	27	29	.67	7.5	.71	.50
	*Anthropology**	*44*	*49*	*43*	*59*	*56*	*59*	*69*
015.	California, University of-Santa Barbara	16	19	42	.68	7.3	.50	.17
	Anthropology	*49*	*45*	*47*	*60*	*58*	*41*	*41*
016.	Catholic University of America	6	17	34	.28	12.3	.63	.13
	Anthropology	*36*	*44*	*45*	*40*	*17*	*52*	*37*
017.	Chicago, University of	30	57	109	.83	8.4	.83	.52
	Anthropology	*67*	*67*	*67*	*67*	*49*	*69*	*71*
018.	Colorado, University of	18	49	47	.35	8.3	.66	.30
	Anthropology	*51*	*62*	*49*	*44*	*49*	*55*	*51*
019.	Columbia University	19	63	175	.58	8.8	.60	.27
	Anthropology	*53*	*70*	*87*	*55*	*45*	*49*	*49*
020.	Connecticut, University of-Storrs	17	17	40	NA	NA	NA	NA
	Anthropology	*50*	*44*	*47*				

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 3.1 Program Measures (Raw and Standardized Values) in Anthropology

Prog No.	Survey Results (08)	(09)	(10)	(11)	University Library (12)	Research Support (13)	(14)	Published Articles (17)	(18)	Survey Ratings Standard Error (08)	(09)	(10)	(11)
001.	1.3	0.8	0.9	0.3	NA	.00	NA	6	.50	.11	.14	.12	.05
	32	*29*	*44*	*27*		*33*		*38*	*41*				
002.	2.6	1.7	1.3	0.9	-0.3	.20	NA	27	.60	.09	.08	.09	.07
	48	*52*	*61*	*45*	*43*	*49*		*49*	*49*				
003.	4.0	2.3	1.2	1.6	0.9	.24	NA	54	.58	.08	.07	.08	.06
	66	*66*	*57*	*66*	*55*	*52*		*62*	*47*				
004.	2.2	1.2	0.7	0.9	-0.4	.10	NA	20	.60	.11	.10	.10	.07
	42	*40*	*37*	*45*	*43*	*41*		*45*	*49*				
005.	2.7	1.5	0.8	1.0	NA	.30	NA	5	.40	.10	.10	.06	.07
	49	*47*	*43*	*47*		*57*		*38*	*33*				
006.	2.3	1.4	0.9	0.9	-1.1	.23	NA	16	.54	.09	.09	.09	.07
	44	*45*	*45*	*45*	*36*	*51*		*43*	*44*				
007.	2.4	1.6	1.2	0.9	NA	NA	NA	17	NA	.12	.10	.08	.06
	45	*49*	*56*	*47*				*44*					
008.	3.7	1.9	1.3	1.3	NA	.24	NA	42	.61	.09	.08	.08	.07
	62	*56*	*60*	*58*		*52*		*56*	*50*				
009.	4.6	2.4	1.0	1.8	2.2	.38	NA	87	.66	.07	.07	.06	.05
	74	*69*	*47*	*73*	*68*	*62*		*78*	*54*				
010.	2.5	1.6	1.3	0.7	0.6	.21	NA	47	.74	.08	.08	.09	.06
	46	*50*	*60*	*41*	*53*	*50*		*59*	*60*				
011.	3.0	1.7	1.4	1.0	NA	.15	NA	16	.35	.10	.08	.08	.07
	53	*52*	*66*	*50*		*45*		*43*	*29*				
012.	3.8	2.1	1.2	1.4	2.0	.21	NA	52	.65	.07	.05	.06	.06
	63	*63*	*55*	*62*	*66*	*49*		*61*	*53*				
013.	2.3	1.5	0.8	0.8	-1.0	NA	NA	21	NA	.12	.10	.08	.07
	44	*47*	*42*	*43*	*37*			*46*					
014.	3.3	1.9	1.3	1.2	-0.0	.17	NA	16	.67	.14	.08	.07	.08
	57	*57*	*60*	*54*	*46*	*46*		*43*	*55*				
015.	3.5	1.9	1.4	1.3	-0.1	.38	NA	26	.81	.09	.07	.08	.06
	60	*56*	*63*	*58*	*45*	*62*		*48*	*66*				
016.	1.4	0.9	0.8	0.6	NA	NA	NA	1	NA	.10	.09	.09	.06
	33	*32*	*42*	*36*				*36*					
017.	4.6	2.4	0.8	1.8	0.9	.37	NA	77	.70	.08	.07	.07	.05
	73	*70*	*42*	*72*	*55*	*62*		*73*	*57*				
018.	2.5	1.6	0.7	0.9	-0.9	.22	NA	23	.56	.09	.08	.07	.08
	47	*49*	*36*	*47*	*38*	*51*		*47*	*46*				
019.	3.6	1.9	0.3	1.4	1.7	.47	NA	35	.74	.10	.06	.06	.07
	60	*56*	*22*	*62*	*64*	*70*		*53*	*60*				
020.	2.6	1.5	1.1	1.0	-0.5	.18	NA	10	.24	.09	.09	.10	.07
	48	*46*	*52*	*48*	*42*	*47*		*40*	*20*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 3.1 Program Measures (Raw and Standardized Values) in Anthropology

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
021.	Cornell University-Ithaca	23	43	37	.87	8.4	.74	.37
	Anthropology	*58*	*59*	*46*	*69*	*49*	*61*	*58*
022.	Duke University	15	14	23	.80	6.4	.60	.20
	Anthropology	*48*	*42*	*42*	*66*	*66*	*50*	*44*
023.	Florida, University of-Gainesville	25	35	78	.47	6.4	.47	.27
	Anthropology	*60*	*54*	*58*	*50*	*66*	*39*	*49*
024.	Georgia, University of-Athens	5	12	4	.18	10.7	.55	.00
	*Anthropology**	*35*	*41*	*36*	*36*	*30*	*45*	*27*
025.	Harvard University	19	78	111	.62	7.5	.69	.30
	Anthropology	*53*	*79*	*68*	*57*	*56*	*57*	*52*
026.	Hawaii, University of	15	30	66	.61	10.5	.57	.18
	Anthropology	*48*	*51*	*54*	*56*	*31*	*47*	*42*
027.	Illinois, University-Urbana/Champaign	26	52	71	.62	8.1	.89	.47
	Anthropology	*62*	*64*	*56*	*57*	*51*	*74*	*66*
028.	Indiana University-Bloomington	18	45	61	.40	9.6	.70	.28
	Anthropology	*51*	*60*	*53*	*46*	*39*	*59*	*50*
029.	Kansas, University of	15	17	27	.35	8.2	.65	.35
	Anthropology	*48*	*44*	*43*	*44*	*51*	*54*	*56*
030.	Kentucky, University of	11	10	28	NA	NA	NA	NA
	Anthropology	*43*	*40*	*43*				
031.	Massachusetts, University of-Amherst	17	26	90	.33	7.1	.62	.48
	Anthropology	*50*	*49*	*62*	*43*	*59*	*52*	*67*
032.	Michigan State University-East Lansing	21	32	49	.45	9.1	.77	.50
	Anthropology	*55*	*52*	*49*	*49*	*43*	*64*	*69*
033.	Michigan, University of-Ann Arbor	43	63	56	.44	7.1	.68	.39
	Anthropology	*83*	*70*	*51*	*48*	*60*	*56*	*59*
034.	Minnesota, University of	14	23	19	.48	8.7	.63	.29
	Anthropology	*46*	*47*	*40*	*50*	*47*	*52*	*51*
035.	Missouri, University of-Columbia	12	16	23	.33	7.8	.48	.26
	Anthropology	*44*	*43*	*42*	*43*	*54*	*40*	*49*
036.	New Mexico, University of-Albuquerque	26	23	101	.41	7.7	.53	.29
	Anthropology	*62*	*47*	*65*	*47*	*55*	*44*	*51*
037.	New School for Social Research	5	30	63	.11	9.5	.77	.29
	*Anthropology**	*35*	*51*	*54*	*32*	*40*	*64*	*51*
038.	New York University	10	19	13	.39	8.5	.67	.28
	Anthropology	*41*	*45*	*39*	*46*	*48*	*56*	*50*
039.	North Carolina, University of-Chapel Hill	20	24	45	.67	8.6	.63	.38
	Anthropology	*54*	*48*	*48*	*59*	*47*	*52*	*58*
040.	Northwestern University	14	31	28	.53	6.5	.64	.36
	Anthropology	*46*	*52*	*43*	*53*	*65*	*54*	*57*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 3.1 Program Measures (Raw and Standardized Values) in Anthropology

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
021.	3.3	2.0	0.8	1.2	1.6	.04	NA	33	.61	.09	.05	.09	.06
	57	*60*	*43*	*56*	*63*	*37*		*52*	*50*				
022.	3.0	1.8	1.4	1.1	0.3	.40	NA	30	.60	.09	.07	.10	.07
	53	*54*	*63*	*52*	*50*	*64*		*50*	*49*				
023.	3.3	1.7	1.8	1.2	0.8	.24	NA	54	.64	.10	.08	.06	.08
	57	*53*	*80*	*54*	*54*	*52*		*62*	*52*				
024.	1.0	0.6	0.8	0.6	0.4	NA	NA	9	NA	.11	.09	.14	.07
	27	*25*	*42*	*37*	*51*			*40*					
025.	3.8	2.1	0.5	1.7	3.0	.42	NA	42	.74	.10	.07	.07	.05
	63	*61*	*31*	*70*	*76*	*66*		*56*	*60*				
026.	2.8	1.8	1.0	0.8	-0.1	.07	NA	32	.73	.09	.07	.09	.06
	51	*54*	*51*	*44*	*45*	*39*		*51*	*60*				
027.	3.5	1.9	1.1	1.3	2.0	.31	NA	40	.65	.08	.06	.07	.06
	60	*57*	*51*	*58*	*66*	*57*		*55*	*54*				
028.	2.8	1.8	0.9	1.0	0.9	.11	NA	25	.61	.09	.07	.06	.06
	50	*55*	*47*	*48*	*56*	*42*		*48*	*50*				
029.	2.3	1.4	1.0	0.8	0.1	.20	NA	36	.60	.10	.10	.09	.07
	44	*44*	*48*	*43*	*48*	*49*		*53*	*49*				
030.	2.0	1.2	1.0	0.7	-0.1	.09	NA	9	.46	.12	.11	.12	.07
	41	*40*	*49*	*40*	*46*	*40*		*40*	*37*				
031.	3.1	1.9	1.4	1.2	-0.7	.24	NA	44	.82	.10	.08	.09	.08
	54	*58*	*63*	*53*	*39*	*52*		*57*	*67*				
032.	2.6	1.7	1.0	0,9	0.3	.24	NA	14	.43	.10	.07	.09	.07
	48	*51*	*48*	*46*	*50*	*52*		*42*	*35*				
033.	4.5	2.6	1.1	1.7	1.8	.40	NA	114	.67	.07	.05	.07	.05
	73	*74*	*52*	*71*	*64*	*64*		*92*	*55*				
034.	2.5	1.4	0.7	0.8	1.2	.07	NA	13	.43	.10	.09	.09	.06
	46	*44*	*37*	*42*	*58*	*39*		*42*	*35*				
035.	2.2	1.4	0.7	0.8	-0.2	.33	NA	27	.75	.10	.11	.09	.08
	43	*45*	*37*	*42*	*45*	*59*		*49*	*61*				
036.	3.6	2.0	1.4	1.3	-1.0	.04	NA	37	.58	.08	.06	.07	.06
	61	*59*	*64*	*59*	*37*	*36*		*54*	*47*				
037.	2.0	1.0	0.9	1.0	NA	NA	NA	14	NA	.16	.12	.08	.07
	41	*35*	*45*	*48*				*42*					
038.	2.5	1.5	0.7	1.1	0.5	.50	NA	23	.60	.10	.08	.10	.07
	47	*47*	*36*	*51*	*51*	*72*		*47*	*49*				
039.	2.8	1.7	0.9	1.0	1.0	.25	NA	17	.45	.09	.08	.09	.07
	51	*53*	*47*	*49*	*56*	*53*		*44*	*37*				
040.	3.6	2.1	1.3	1.5	0.3	.43	NA	36	.71	.07	.06	.09	.06
	61	*61*	*63*	*65*	*49*	*67*		*53*	*58*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 3.1 Program Measures (Raw and Standardized Values) in Anthropology

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
041.	Ohio State University-Columbus	12	18	26	.53	7.3	.53	.33
	Anthropology	*44*	*44*	*43*	*53*	*58*	*44*	*55*
042.	Oklahoma, University of-Norman	9	10	28	.10	8.5	.50	.30
	Anthropology	*40*	*40*	*43*	*32*	*48*	*41*	*52*
043.	Oregon, University of-Eugene	11	30	59	.56	8.2	.42	.14
	Anthropology	*43*	*51*	*52*	*54*	*50*	*34*	*38*
044.	Pennsylvania State University	13	28	40	.28	7.1	.46	.25
	Anthropology	*45*	*50*	*47*	*40*	*60*	*38*	*48*
045.	Pennsylvania, University of	32	38	108	.55	9.1	.76	.32
	Anthropology	*69*	*56*	*67*	*53*	*43*	*63*	*54*
046.	Pittsburgh, University of	23	46	88	.63	9.6	.58	.21
	Anthropology	*58*	*60*	*61*	*57*	*39*	*48*	*44*
047.	Princeton University	7	13	15	.82	7.9	.64	.36
	Anthropology	*37*	*41*	*39*	*66*	*53*	*53*	*57*
048.	Rice University	7	8	15	NA	NA	NA	NA
	Anthropology	*37*	*38*	*39*				
049.	Rochester, University of	9	11	22	NA	NA	NA	NA
	Anthropology	*40*	*40*	*41*				
050.	Rutgers, The State University-New Brunswick	16	15	75	.60	7.0	.64	.36
	Anthropology	*49*	*42*	*57*	*56*	*61*	*53*	*57*
051.	SUNY at Albany	12	16	43	.00	NA	NA	NA
	*Anthropology**	*44*	*43*	*48*	*27*			
052.	SUNY at Binghamton	18	17	75	.31	8.2	.56	.25
	Anthropology	*51*	*44*	*57*	*42*	*51*	*47*	*48*
053.	SUNY at Buffalo	21	32	55	.23	7.2	.69	.17
	Anthropology	*55*	*52*	*51*	*38*	*59*	*58*	*41*
054.	SUNY at Stony Brook	14	26	62	.16	6.4	.42	.16
	Anthropology	*46*	*49*	*53*	*35*	*65*	*35*	*40*
055.	Southern Illinois University-Carbondale	14	26	31	.36	9.3	.46	.21
	Anthropology	*46*	*49*	*44*	*44*	*41*	*38*	*44*
056.	Southern Methodist University	17	19	53	.40	8.5	.40	.07
	Anthropology	*50*	*45*	*51*	*46*	*48*	*33*	*32*
057.	Stanford University	19	34	51	.95	8.5	.67	.42
	Anthropology	*53*	*53*	*50*	*73*	*48*	*56*	*62*
058.	Syracuse University	8	19	22	.29	10.3	.35	.10
	Anthropology	*39*	*45*	*41*	*41*	*33*	*29*	*35*
059.	Tennessee, University of-Knoxville	11	7	24	NA	NA	NA	NA
	*Anthropology**	*43*	*38*	*42*				
060.	Texas, University of-Austin	27	48	47	.35	6.6	.64	.26
	Anthropology	*63*	*62*	*49*	*44*	*64*	*54*	*49*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 3.1 Program Measures (Raw and Standardized Values) in Anthropology

Prog No.	Survey Results (08)	Survey Results (09)	Survey Results (10)	Survey Results (11)	University Library (12)	Research Support (13)	Research Support (14)	Published Articles (17)	Published Articles (18)	Survey Ratings Standard Error (08)	Survey Ratings Standard Error (09)	Survey Ratings Standard Error (10)	Survey Ratings Standard Error (11)
041.	2.0	1.4	1.1	0.7	0.9	.17	NA	13	.42	.09	.08	.05	.06
	40	*45*	*54*	*40*	*55*	*46*		*42*	*34*				
042.	1.4	0.9	1.0	0.5	-0.6	NA	NA	9	NA	.12	.10	.15	.07
	32	*32*	*48*	*33*	*41*			*40*					
043.	2.3	1.5	0.8	0.7	-0.9	.09	NA	15	.73	.11	.10	.08	.07
	44	*47*	*42*	*41*	*37*	*40*		*43*	*59*				
044.	3.0	1.8	1.0	1.1	0.7	.31	NA	27	.77	.11	.09	.09	.07
	53	*55*	*48*	*53*	*54*	*57*		*49*	*63*				
045.	4.1	2.3	1.1	1.6	0.7	.19	NA	42	.59	.08	.06	.07	.06
	67	*66*	*53*	*66*	*53*	*48*		*56*	*49*				
046.	3.0	1.8	0.9	1.3	0.1	.22	NA	69	.70	.08	.07	.09	.06
	53	*54*	*45*	*57*	*47*	*50*		*69*	*57*				
047.	2.5	1.5	0.9	1.1	0.9	NA	NA	17	NA	.13	.09	.09	.07
	47	*46*	*44*	*52*	*55*			*44*					
048.	1.9	0.9	0.7	0.9	-1.4	NA	NA	15	NA	.15	.13	.10	.07
	39	*33*	*38*	*44*	*32*			*43*					
049.	2.0	1.5	0.9	0.8	-0.6	NA	NA	3	NA	.12	.10	.06	.07
	41	*46*	*45*	*41*	*40*			*37*					
050.	3.2	1.7	1.3	1.4	0.8	.00	NA	28	.75	.10	.09	.08	.07
	56	*51*	*60*	*59*	*54*	*33*		*49*	*61*				
051.	2.1	1.1	1.2	0.8	-1.0	.25	NA	35	.83	.12	.09	.11	.07
	41	*37*	*55*	*44*	*37*	*53*		*53*	*68*				
052.	2.6	1.7	1.3	1.0	NA	.33	NA	35	.44	.10	.09	.09	.07
	48	*51*	*61*	*50*		*59*		*53*	*36*				
053.	2.8	1.6	1.2	1.2	0.3	.24	NA	39	.67	.08	.07	.08	.07
	51	*51*	*55*	*54*	*49*	*52*		*55*	*55*				
054.	2.4	1.3	0.9	0.9	-0.6	.00	NA	27	.64	.09	.10	.10	.07
	45	*42*	*46*	*46*	*40*	*33*		*49*	*53*				
055.	2.1	1.3	1.1	0.8	-0.2	.29	NA	31	.79	.11	.10	.11	.07
	41	*43*	*52*	*41*	*45*	*55*		*51*	*64*				
056.	2.4	1.4	1.2	0.8	NA	.18	NA	14	.47	.11	.09	.12	.08
	45	*46*	*56*	*42*		*47*		*42*	*39*				
057.	3.8	2.3	0.9	1.5	2.0	.37	NA	27	.63	.10	.08	.07	.06
	63	*66*	*45*	*65*	*67*	*62*		*49*	*52*				
058.	1.8	1.1	0.8	0.6	-0.3	NA	NA	17	NA	.13	.11	.09	.07
	38	*36*	*42*	*37*	*43*			*44*					
059.	1.7	1.2	1.2	0.6	-0.4	.18	NA	27	.64	.13	.11	.11	.08
	36	*40*	*56*	*37*	*42*	*47*		*49*	*52*				
060.	3.5	2.1	1.3	1.3	1.6	.11	NA	58	.70	.09	.07	.08	.07
	59	*61*	*62*	*57*	*63*	*42*		*64*	*58*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 3.1 Program Measures (Raw and Standardized Values) in Anthropology

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
061.	Tulane University	10	14	60	.69	10.0	.44	.06
	Anthropology	*41*	*42*	*53*	*60*	*35*	*36*	*32*
062.	Utah, University of-Salt Lake City	15	9	24	NA	NA	NA	NA
	Anthropology	*48*	*39*	*42*				
063.	Virginia, University of	17	11	30	NA	NA	NA	NA
	*Anthropology**	*50*	*40*	*44*				
064.	Washington State University-Pullman	17	35	31	.29	8.1	.68	.42
	*Anthropology**	*50*	*54*	*44*	*41*	*52*	*56*	*62*
065.	Washington University-Saint Louis	8	18	25	.47	9.0	.63	.32
	Anthropology	*39*	*44*	*42*	*50*	*44*	*53*	*53*
066.	Washington, University of-Seattle	25	35	61	.64	9.3	.50	.18
	Anthropology	*60*	*54*	*53*	*58*	*42*	*41*	*42*
067.	Wayne State University	13	17	9	.36	9.7	.36	.27
	Anthropology	*45*	*44*	*37*	*45*	*38*	*30*	*50*
068.	Wisconsin, University of-Madison	17	34	67	.69	7.6	.54	.32
	Anthropology	*50*	*53*	*55*	*60*	*56*	*45*	*54*
069.	Wisconsin, University of-Milwaukee	11	17	16	.21	6.9	.71	.29
	*Anthropology**	*43*	*44*	*40*	*37*	*61*	*60*	*51*
070.	Yale University	24	32	59	.61	7.1	.76	.46
	Anthropology	*59*	*52*	*52*	*56*	*60*	*63*	*65*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 3.1 Program Measures (Raw and Standardized Values) in Anthropology

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
061.	2.5	1.5	0.8	1.0	-1.0	.10	NA	12	.60	.10	.08	.07	.06
	47	*48*	*40*	*49*	*36*	*41*		*41*	*49*				
062.	2.2	1.3	1.1	0.8	-0.6	.00	NA	23	.60	.10	.11	.09	.06
	42	*43*	*53*	*42*	*40*	*33*		*47*	*49*				
063.	3.0	1.6	1.5	1.2	0.7	.06	NA	23	.59	.11	.09	.08	.07
	53	*49*	*71*	*54*	*54*	*38*		*47*	*48*				
064.	2.2	1.4	1.3	0.6	-0.3	.18	NA	24	.41	.11	.11	.09	.07
	43	*45*	*61*	*37*	*44*	*47*		*47*	*34*				
065.	2.4	1.5	1.0	1.1	-0.4	NA	NA	9	NA	.11	.09	.10	.07
	45	*47*	*48*	*53*	*43*			*40*					
066.	3.1	1.9	1.2	1.2	1.5	.24	NA	61	.52	.09	.07	.08	.06
	55	*58*	*57*	*55*	*61*	*52*		*65*	*43*				
067.	2.0	1.1	1.0	0.7	-0.4	.08	NA	22	.62	.12	.11	.08	.07
	41	*37*	*48*	*38*	*43*	*39*		*46*	*50*				
068.	3.0	1.8	0.8	1.1	1.6	.35	NA	39	.71	.09	.08	.07	.07
	53	*56*	*41*	*53*	*62*	*61*		*55*	*58*				
069.	2.3	1.3	0.8	0.9	NA	.00	NA	27	.64	.09	.08	.08	.07
	44	*43*	*41*	*45*		*33*		*49*	*52*				
070.	3.9	2.2	0.9	1.5	2.1	.38	NA	56	.58	.08	.06	.07	.06
	65	*63*	*45*	*64*	*67*	*62*		*63*	*48*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 3.2 Summary Statistics Describing Each Program Measure--Anthropology

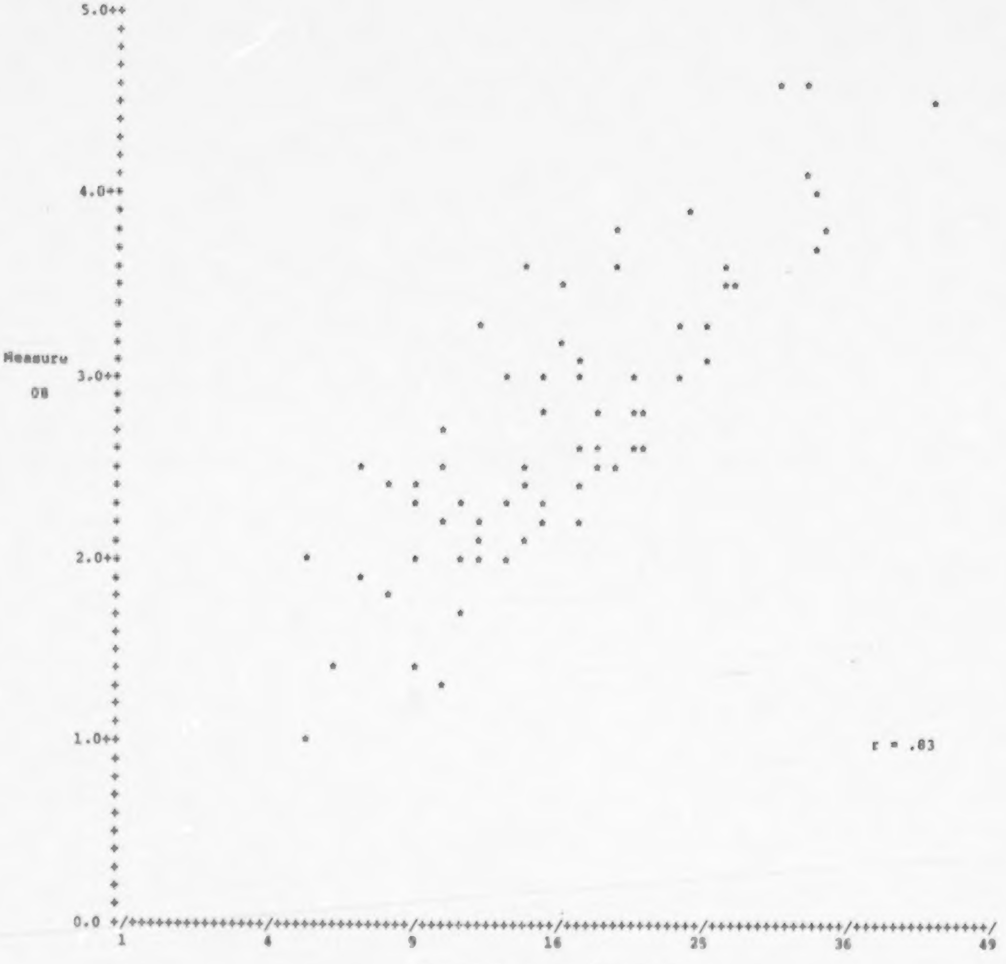
Measure	Number of Programs Evaluated	Mean	Standard Deviation	DECILES 1	2	3	4	5	6	7	8	9
Program Size												
01 Raw Value	70	17	8	8	10	12	14	15	17	19	23	27
Std Value	70	50	10	39	41	44	46	48	50	53	58	63
02 Raw Value	70	28	17	11	14	17	19	24	28	32	35	49
Std Value	70	50	10	40	42	44	45	48	50	52	54	62
03 Raw Value	70	51	34	16	24	28	32	42	51	61	75	101
Std Value	70	50	10	40	42	43	44	47	50	53	57	65
Program Graduates												
04 Raw Value	61	.48	.21	.22	.31	.35	.40	.47	.52	.60	.64	.69
Std Value	61	50	10	38	42	44	46	50	52	56	58	60
05 Raw Value	61	8.3	1.2	9.7	9.3	9.0	8.5	8.2	7.9	7.5	7.1	6.9
Std Value	61	50	10	38	41	44	48	51	53	56	60	61
06 Raw Value	60	.60	.12	.44	.48	.53	.57	.62	.64	.67	.70	.76
Std Value	60	50	10	37	40	44	48	52	53	56	58	63
07 Raw Value	60	.28	.12	.12	.17	.20	.25	.28	.30	.33	.37	.46
Std Value	60	50	10	37	41	43	48	50	52	54	58	65
Survey Results												
08 Raw Value	70	2.8	.8	1.9	2.1	2.3	2.5	2.6	2.8	3.1	3.5	3.8
Std Value	70	50	10	39	42	44	47	48	51	54	59	63
09 Raw Value	70	1.6	.4	1.1	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.1
Std Value	70	50	10	38	42	45	47	50	52	55	57	62
10 Raw Value	70	1.0	.3	.7	.8	.9	.9	1.0	1.1	1.2	1.3	1.3
Std Value	70	50	10	37	41	45	45	49	53	57	61	61
11 Raw Value	70	1.1	.3	.6	.8	.8	.9	1.0	1.1	1.2	1.3	1.5
Std Value	70	50	10	36	42	42	45	48	52	55	58	64
University Library												
12 Raw Value	60	.4	1.0	-1.0	-.6	-.4	-.1	.3	.6	.9	1.2	1.8
Std Value	60	50	10	36	40	42	45	49	52	55	58	64
Research Support												
13 Raw Value	59	.22	.13	.03	.09	.14	.18	.21	.24	.26	.34	.38
Std Value	59	50	10	35	40	44	47	49	52	53	59	62
Publication Records												
17 Raw Value	70	30	20	9	14	17	23	27	28	35	42	54
Std Value	70	50	10	40	42	44	47	49	49	53	56	62
18 Raw Value	59	.61	.12	.43	.49	.58	.60	.61	.64	.67	.72	.75
Std Value	59	50	10	35	40	48	49	50	53	55	59	62

NOTE: Standardized values reported in the preceding table have been computed from exact values of the mean and standard deviation and not the rounded values reported here.

TABLE 3.3 Intercorrelations Among Program Measures on 70 Programs in Anthropology

	Measure															
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	17	18
Program Size																
01		.69	.64	.20	.18	.30	.38	.83	.81	.32	.72	.58	.24	N/A	.82	.05
02			.68	.23	.10	.43	.35	.71	.68	-.15	.67	.68	.39	N/A	.70	.24
03				.14	.02	.19	.23	.65	.60	.01	.63	.40	.25	N/A	.53	.25
Program Graduates																
04					.06	.18	.18	.49	.54	-.09	.44	.45	.26	N/A	.15	-.07
05						.10	.33	.34	.35	.37	.30	.13	.10	N/A	.25	.13
06							.68	.40	.40	-.11	.44	.45	.21	N/A	.30	.03
07								.50	.52	.08	.47	.35	.21	N/A	.35	.05
Survey Results																
08									.96	.21	.95	.64	.46	N/A	.75	.26
09										.23	.89	.63	.48	N/A	.73	.24
10											.11	-.08	-.16	N/A	.20	-.04
11												.65	.51	N/A	.71	.30
University Library																
12													.43	N/A	.53	.05
Research Support																
13														N/A	.39	.22
14															N/A	N/A
Publication Records																
17																.41
18																

NOTE: Since in computing correlation coefficients program data must be available for both of the measures being correlated, the actual number of programs on which each coefficient is based varies.



Measure 01 (square root scale)

FIGURE 3.1 Mean rating of scholarly quality of faculty (measure 08) versus number of faculty members (measure 01)--70 programs in anthropology.

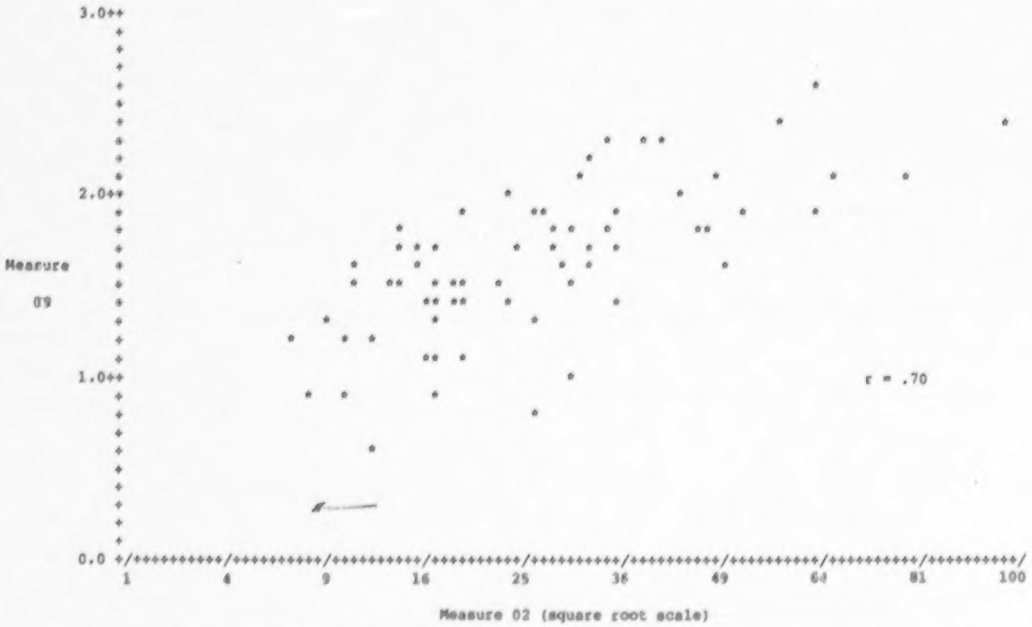


FIGURE 3.2 Mean rating of program effectiveness in educating research scholars/scientists (measure 09) versus number of graduates in last five years (measure 02)--70 programs in anthropology.

TABLE 3.4 Characteristics of Survey Participants in Anthropology

	Respondents	
	N	%
Field of Specialization		
Archaeology	28	22
Cultural Anthropology	70	56
Physical Anthropology	17	14
Other/Unknown	10	8
Faculty Rank		
Professor	71	57
Associate Professor	38	30
Assistant Professor	16	13
Year of Highest Degree		
Pre-1950	3	2
1950-59	22	18
1960-69	55	44
Post-1969	44	35
Unknown	1	1
Evaluator Selection		
Nominated by Institution	112	90
Other	13	10
Survey Form		
With Faculty Names	111	89
Without Names	14	11
Total Evaluators	125	100

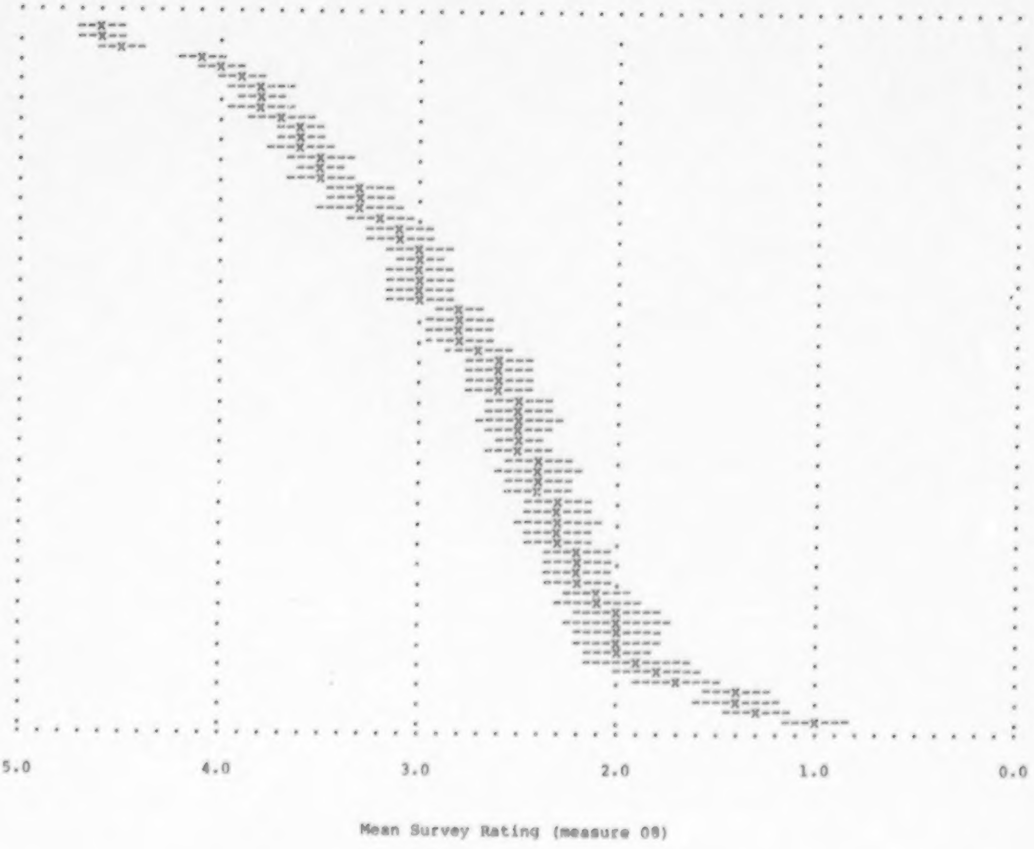


FIGURE 3.3 Mean rating of scholarly quality of faculty in 70 programs in anthropology.

NOTE: Programs are listed in sequence of mean rating, with the highest-rated program appearing at the top of the page. The broken lines (---) indicate a confidence interval of ±1.5 standard errors around the reported mean (x) of each program.

IV

Economics Programs

In this chapter 93 research-doctorate programs in economics are assessed. These programs, according to the information supplied by their universities, have accounted for 3,770 doctoral degrees awarded during the FY1976-80 period--approximately 92 percent of the aggregate number of economics and econometrics doctorates earned from U.S. universities in this five-year span.[1] On the average, 68 full-time and part-time students intending to earn doctorates were enrolled in a program in December 1980, with an average faculty size of 23 members.[2] Two programs were initiated since 1970. Each of two institutions--the University of California (Davis) and Oklahoma State University--has two economics programs included in the assessment. In addition to the 91 institutions represented in this discipline, another 3 were initially identified as meeting the criteria[3] for inclusion in the assessment:

Colorado School of Mines
SUNY at Buffalo
Utah State University--Logan

The Colorado School of Mines chose not to participate in the assessment in _any_ discipline. Economics programs at the other two institutions have not been included in the evaluations in this discipline, since in each case the study coordinator either indicated that the institution did not at that time have a research-doctorate program in economics or failed to provide the information requested by the committee.

---

[1] Data from the NRC's Survey of Earned Doctorates indicate that 3,966 research doctorates in economics and another 126 research doctorates in econometrics were awarded by U.S. universities between FY1976 and FY1980.

[2] See the reported means for measures 03 and 01 in Table 4.2.

[3] As mentioned in Chapter I, the primary criterion for inclusion was that a university had awarded at least 12 doctorates in economics during the FY1976-78 period.

Before examining individual program results presented in Table 4.1, the reader is urged to refer to Chapter II, in which each of the 16 measures used in the assessment is discussed. Summary statistics describing every measure are given in Table 4.2. For 14 of the measures, data are reported for at least 91 of the 93 economics programs. For measure 12, a composite index of the size of a university library, data are available for 75 programs; for measure 14, the total university expenditures for research in this discipline, data are available for 69 programs. The programs not evaluated on measures 12 and 14 are typically smaller--in terms of faculty size and graduate student enrollment--than other economics programs. Were data on these two measures available for all 93 programs, it is likely that their reported means would be appreciably lower (and that some of the correlations of these measures with others would be higher).

Intercorrelations among the 16 measures (Pearson product-moment coefficients) are given in Table 4.3. Of particular note are the high positive correlations of the reputational survey results with the total number of FY1976-80 program graduates (measure 02) and the total number of 1978-80 articles by program faculty (measure 17). Figure 4.1 illustrates the relation between the mean rating of the scholarly quality of faculty (measure 08) and the number of faculty members (measure 01) for each of 93 programs in economics. Figure 4.2 plots the mean rating of program effectiveness (measure 09) against the total number of FY1976-80 program graduates (measure 02). Although in both figures there is a significant positive correlation between program size and reputational rating, it is quite apparent that some of the smaller programs received high mean ratings and that some of the larger programs received low mean ratings.

Table 4.4 describes the 185 faculty members who participated in the evaluation of economics programs. These individuals constituted 66 percent of those asked to respond to the survey in this discipline and 9 percent of the faculty population in the 93 research-doctorate programs being evaluated.[4] A majority of the survey participants had earned their highest degree prior to 1970, and more than half held the rank of full professor.

To assist the reader in interpreting results of the survey evaluations, estimated standard errors have been computed for mean ratings of the scholarly quality of faculty in 93 economics programs (and are given in Table 4.1). For each program the mean rating and an associated "confidence interval" of 1.5 standard errors are illustrated in Figure 4.3 (listed in order of highest to lowest mean rating). In comparing two programs, if their confidence intervals do not overlap, one may conclude that there is a significant difference in their mean ratings at a .05 level of significance.[5] From this figure it is also apparent that one should have somewhat more confidence in the accuracy of the mean ratings of higher-rated programs than lower-rated programs. This generalization results primarily from the fact that evaluators are not as likely to be familiar with the less prestigious programs, and consequently the mean ratings of these programs are usually based on fewer survey responses.

---

[4] See Table 2.3 in Chapter II.

[5] See pp. 30-32 for a discussion of the interpretation of mean ratings and associated confidence intervals.

TABLE 4.1 Program Measures (Raw and Standardized Values) in Economics

Prog No.	University - Department/Academic Unit	Program Size (01)	(02)	(03)	Characteristics of Program Graduates (04)	(05)	(06)	(07)
001.	American University	16	20	140	.17	9.5	.79	.04
	Economics	*43*	*43*	*66*	*46*	*31*	*51*	*35*
002.	Arkansas, University-Fayetteville	19	26	15	.12	7.5	.83	.21
	Economics	*46*	*45*	*38*	*42*	*48*	*55*	*47*
003.	Boston College	21	23	69	.16	7.3	.80	.24
	Economics	*48*	*44*	*50*	*46*	*50*	*52*	*49*
004.	Boston University	38	25	80	.11	9.7	.80	.00
	Economics	*65*	*44*	*53*	*41*	*30*	*52*	*32*
005.	Brown University	15	34	50	.19	6.6	.70	.38
	Economics	*42*	*48*	*46*	*48*	*56*	*43*	*58*
006.	CUNY-Graduate School	13	40	57	.22	8.8	.56	.17
	Economics	*40*	*50*	*48*	*51*	*37*	*29*	*44*
007.	California Institute of Technology	19	10	18	NA	NA	NA	NA
	*Economics**	*46*	*39*	*39*				
008.	California, University of-Berkeley	26	118	135	.28	7.0	.85	.38
	Economics	*53*	*78*	*65*	*56*	*52*	*57*	*58*
009.	California, University of-Davis	26	33	61	.19	6.0	.85	.46
	Agricultural Economics	*53*	*47*	*48*	*49*	*61*	*56*	*64*
010.	California, University of-Davis	19	23	61	.22	6.7	.83	.11
	Economics	*46*	*44*	*48*	*51*	*55*	*55*	*40*
011.	California, University of-Los Angeles	27	73	118	.14	7.0	.75	.35
	Economics	*54*	*62*	*61*	*44*	*52*	*47*	*56*
012.	California, University of-Riverside	10	17	33	.07	7.0	.73	.20
	Economics	*36*	*42*	*42*	*37*	*52*	*46*	*46*
013.	California, University of-San Diego	20	19	56	.33	6.5	.56	.28
	Economics	*47*	*42*	*47*	*61*	*56*	*29*	*51*
014.	California, University of-Santa Barbara	25	30	51	.13	7.3	.73	.13
	Economics	*52*	*46*	*46*	*43*	*50*	*46*	*41*
015.	Carnegie-Mellon University	17	13	22	.43	5.5	.94	.75
	Industrial Administration	*44*	*40*	*40*	*70*	*65*	*65*	*84*
016.	Case Western Reserve University	10	12	16	.42	9.9	.73	.18
	Economics	*36*	*40*	*38*	*69*	*28*	*45*	*45*
017.	Chicago, University of	27	121	120	.37	7.0	.93	.44
	Economics	*54*	*79*	*62*	*65*	*53*	*64*	*63*
018.	Cincinnati, University of	16	29	53	.08	7.3	.68	.12
	Economics	*43*	*46*	*47*	*38*	*50*	*40*	*41*
019.	Claremont Graduate School	19	28	50	.27	8.9	.74	.06
	Economics	*46*	*46*	*46*	*56*	*36*	*46*	*36*
020.	Clark University	9	14	35	.26	7.0	.94	.28
	Economics	*35*	*40*	*43*	*55*	*52*	*66*	*51*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 4.1 Program Measures (Raw and Standardized Values) in Economics

Prog	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
No.	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
001.	1.3	0.7	1.1	0.5	NA	.06	74	12	.31	.11	.11	.08	.06
	42	*40*	*49*	*42*		*46*	*41*	*40*	*29*				
002.	0.7	0.3	NA	0.2	NA	.00	1043	13	.42	.09	.09	NA	.04
	36	*33*		*36*		*42*	*52*	*40*	*37*				
003.	1.8	1.1	1.2	0.8	NA	.14	NA	33	.48	.11	.09	.09	.06
	46	*47*	*51*	*48*		*52*		*45*	*40*				
004.	2.3	1.4	1.5	0.8	-0.4	.05	350	24	.29	.09	.09	.09	.06
	50	*50*	*63*	*49*	*45*	*45*	*44*	*43*	*28*				
005.	3.4	2.0	1.0	1.5	-1.1	.40	108	33	.67	.08	.06	.06	.06
	59	*60*	*44*	*63*	*38*	*71*	*42*	*45*	*53*				
006.	1.6	0.9	0.9	0.5	NA	.00	280	10	.39	.11	.09	.11	.06
	44	*43*	*43*	*43*		*42*	*44*	*39*	*34*				
007.	3.0	1.9	1.5	1.1	NA	.42	NA	65	.84	.09	.07	.08	.07
	56	*59*	*64*	*55*		*73*		*53*	*64*				
008.	4.1	2.3	0.4	1.6	2.2	.19	2612	67	.69	.07	.06	.06	.05
	65	*65*	*22*	*65*	*70*	*56*	*71*	*54*	*54*				
009.	2.6	1.9	1.1	0.3	0.6	.00	1063	77	.73	.22	.13	.13	.06
	53	*59*	*48*	*39*	*55*	*42*	*53*	*56*	*57*				
010.	2.4	1.3	1.2	0.9	0.6	.11	1063	60	.84	.08	.07	.08	.05
	51	*50*	*51*	*49*	*55*	*49*	*53*	*52*	*64*				
011.	4.1	2.1	1.4	1.8	2.0	.22	1117	64	.70	.06	.07	.06	.04
	65	*62*	*60*	*68*	*68*	*58*	*53*	*53*	*55*				
012.	1.1	0.5	0.5	0.5	-1.0	.00	NA	33	.80	.10	.09	.11	.06
	40	*37*	*28*	*42*	*39*	*42*		*45*	*61*				
013.	3.2	1.8	1.7	1.2	-0.0	.25	NA	31	.60	.08	.07	.06	.07
	58	*57*	*71*	*56*	*48*	*60*		*45*	*48*				
014.	2.2	1.3	1.4	0.9	-0.1	.00	5	78	.64	.09	.08	.09	.06
	49	*49*	*61*	*50*	*48*	*42*	*40*	*56*	*51*				
015.	3.1	2.1	0.8	1.2	NA	.47	585	54	.82	.08	.07	.08	.07
	57	*62*	*37*	*55*		*77*	*47*	*50*	*63*				
016.	0.5	0.4	0.7	0.2	-1.3	.10	NA	12	.50	.09	.09	.10	.04
	35	*35*	*35*	*36*	*36*	*49*		*40*	*42*				
017.	4.8	2.7	1.0	1.9	0.9	.22	617	94	.70	.04	.05	.06	.03
	72	*72*	*44*	*70*	*57*	*58*	*48*	*60*	*55*				
018.	1.0	0.6	1.0	0.2	-0.2	.06	NA	17	.56	.11	.14	.09	.04
	39	*38*	*44*	*37*	*46*	*46*		*41*	*46*				
019.	2.0	1.3	1.1	0.6	NA	.00	NA	25	.37	.10	.11	.12	.06
	48	*49*	*48*	*45*		*42*		*43*	*33*				
020.	0.6	0.5	0.9	0.3	NA	NA	18	9	NA	.10	.09	.07	.05
	36	*36*	*41*	*38*			*41*	*39*					

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 4.1 Program Measures (Raw and Standardized Values) in Economics

Prog No.	University - Department/Academic Unit	Program Size (01)	(02)	(03)	Characteristics of Program Graduates (04)	(05)	(06)	(07)
021.	Colorado State University-Fort Collins	39	28	22	.18	8.3	.78	.33
	Economics	*66*	*46*	*40*	*47*	*42*	*50*	*55*
022.	Colorado, University of	20	62	15	.16	6.7	.71	.16
	Economics	*47*	*58*	*38*	*46*	*55*	*43*	*44*
023.	Columbia University	28	53	213	.21	7.6	.84	.26
	Economics	*55*	*54*	*82*	*50*	*48*	*56*	*50*
024.	Connecticut, University of-Storrs	19	32	45	.27	9.1	.73	.06
	Economics	*46*	*47*	*45*	*56*	*35*	*45*	*37*
025.	Cornell University-Ithaca	24	55	67	.23	6.2	.84	.32
	Economics	*51*	*55*	*50*	*52*	*59*	*56*	*55*
026.	Duke University	22	57	60	.40	6.7	.80	.21
	Economics	*49*	*56*	*48*	*68*	*55*	*52*	*47*
027.	Florida State University-Tallahassee	16	28	60	.27	7.3	.78	.19
	Economics	*43*	*46*	*48*	*56*	*50*	*50*	*45*
028.	Florida, University of-Gainesville	20	22	32	.12	5.4	.64	.04
	Economics	*47*	*43*	*42*	*42*	*66*	*37*	*35*
029.	Fordham University	14	14	57	.14	9.5	.62	.08
	Economics	*41*	*40*	*48*	*44*	*31*	*34*	*38*
030.	George Washington University	24	51	157	.09	9.3	.61	.00
	Economics	*51*	*54*	*70*	*39*	*34*	*34*	*32*
031.	Georgetown University	15	18	47	.05	8.8	.70	.05
	Economics	*42*	*42*	*45*	*36*	*37*	*42*	*36*
032.	Georgia State University-Atlanta	20	25	46	.12	9.1	.84	.16
	Economics	*47*	*44*	*45*	*42*	*35*	*56*	*43*
033.	Harvard University	34	123	130	.37	6.7	.91	.46
	Economics	*61*	*80*	*64*	*64*	*55*	*62*	*64*
034.	Hawaii, University of	21	36	70	.09	7.0	.78	.16
	*Economics**	*48*	*48*	*50*	*39*	*52*	*50*	*43*
035.	Illinois, University-Urbana/Champaign	56	77	98	.15	5.4	.87	.40
	Economics	*83*	*63*	*57*	*45*	*66*	*59*	*60*
036.	Indiana University-Bloomington	21	53	66	.26	8.9	.88	.23
	Economics	*48*	*54*	*50*	*55*	*36*	*59*	*48*
037.	Iowa State University-Ames	32	99	122	.10	6.2	.70	.33
	Economics	*59*	*71*	*62*	*41*	*59*	*42*	*55*
038.	Iowa, University of-Iowa City	23	21	36	.25	6.3	.83	.42
	Economics	*50*	*43*	*43*	*54*	*58*	*55*	*61*
039.	Johns Hopkins University	7	51	41	.26	6.2	.89	.24
	Political Economy	*33*	*54*	*44*	*54*	*59*	*60*	*49*
040.	Kansas, University of	17	8	32	.30	6.3	.70	.40
	Economics	*44*	*38*	*42*	*58*	*59*	*42*	*60*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 4.1 Program Measures (Raw and Standardized Values) in Economics

Prog No.	Survey Results (08)	(09)	(10)	(11)	University Library (12)	Research Support (13)	(14)	Published Articles (17)	(18)	Survey Ratings Standard Error (08)	(09)	(10)	(11)
021.	1.2	0.7	1.1	0.3	-1.1	.00	1064	62	.49	.12	.12	.09	.05
	41	*40*	*49*	*38*	*38*	*42*	*53*	*52*	*41*				
022.	1.6	1.1	0.9	0.5	-0.9	.10	132	41	.70	.12	.11	.10	.06
	44	*46*	*42*	*43*	*40*	*49*	*42*	*47*	*55*				
023.	4.2	2.1	1.4	1.7	1.7	.21	2992	72	.71	.06	.06	.07	.05
	66	*62*	*59*	*65*	*66*	*57*	*75*	*55*	*56*				
024.	1.4	0.8	1.2	0.5	-0.5	.00	108	14	.42	.09	.11	.08	.05
	43	*42*	*53*	*42*	*44*	*42*	*42*	*40*	*37*				
025.	3.2	1.8	1.3	1.3	1.6	.29	1591	42	.71	.06	.05	.07	.06
	57	*57*	*56*	*59*	*64*	*63*	*59*	*47*	*55*				
026.	3.0	1.8	1.4	1.3	0.3	.18	99	90	.77	.06	.06	.07	.06
	56	*58*	*60*	*58*	*52*	*55*	*42*	*59*	*60*				
027.	1.5	1.0	1.0	0.5	-0.4	.00	165	21	.69	.11	.08	.08	.06
	43	*45*	*45*	*42*	*45*	*42*	*42*	*42*	*54*				
028.	2.2	1.2	1.6	0.9	0.8	.05	396	52	.85	.09	.09	.08	.06
	49	*47*	*67*	*51*	*56*	*45*	*45*	*50*	*65*				
029.	0.6	0.4	1.1	0.2	NA	.00	NA	4	.14	.11	.11	.12	.05
	35	*35*	*49*	*37*		*42*		*38*	*18*				
030.	1.7	1.0	1.1	0.7	NA	.04	200	34	.50	.09	.09	.08	.06
	45	*45*	*49*	*47*		*45*	*43*	*45*	*42*				
031.	1.0	0.7	1.0	0.3	-0.6	.00	NA	15	.47	.11	.10	.07	.05
	39	*40*	*44*	*38*	*43*	*42*		*41*	*40*				
032.	1.2	0.7	1.1	0.4	NA	.00	NA	22	.50	.12	.11	.12	.06
	41	*40*	*48*	*40*		*42*		*42*	*42*				
033.	4.9	2.4	1.0	1.9	3.0	.27	1647	197	.79	.03	.07	.07	.03
	72	*67*	*45*	*70*	*78*	*61*	*59*	*86*	*61*				
034.	1.0	0.6	1.0	0.2	-0.1	.00	436	34	.76	.11	.11	.09	.04
	39	*39*	*44*	*37*	*47*	*42*	*45*	*45*	*59*				
035.	2.8	1.6	0.9	1.1	2.0	.13	2858	158	.75	.08	.08	.08	.05
	54	*54*	*42*	*55*	*68*	*51*	*73*	*76*	*58*				
036.	1.9	1.2	0.8	0.7	0.9	.10	49	23	.67	.10	.10	.07	.06
	46	*48*	*38*	*46*	*58*	*49*	*41*	*43*	*53*				
037.	2.4	1.8	0.8	0.8	-0.5	.13	1795	92	.69	.09	.08	.10	.06
	51	*57*	*40*	*47*	*44*	*51*	*61*	*60*	*54*				
038.	2.1	1.3	1.5	0.9	0.3	.09	51	26	.61	.08	.08	.08	.06
	48	*50*	*65*	*50*	*51*	*48*	*41*	*43*	*49*				
039.	3.1	1.9	0.6	1.4	-0.4	NA	38	12	NA	.11	.08	.07	.06
	57	*59*	*31*	*60*	*45*		*41*	*40*					
040.	1.4	0.8	0.8	0.5	0.1	.00	315	10	.35	.11	.10	.11	.06
	42	*42*	*38*	*42*	*50*	*42*	*44*	*39*	*32*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 4.1 Program Measures (Raw and Standardized Values) in Economics

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
041.	Kentucky, University of	17	30	46	.19	6.4	.89	.30
	Economics	*44*	*46*	*45*	*48*	*57*	*60*	*53*
042.	Maryland, University of-College Park	40	45	213	.14	8.3	.77	.20
	Economics	*67*	*52*	*82*	*44*	*42*	*49*	*46*
043.	Massachusetts Institute of Technology	37	129	129	.63	5.6	.91	.53
	Economics	*64*	*82*	*64*	*88*	*64*	*62*	*68*
044.	Massachusetts, University of-Amherst	25	20	94	.16	7.7	.42	.11
	Economics	*52*	*43*	*56*	*45*	*47*	*16*	*40*
045.	Michigan State University-East Lansing	29	40	52	.06	8.0	.74	.24
	Economics	*56*	*50*	*46*	*37*	*44*	*46*	*49*
046.	Michigan, University of-Ann Arbor	45	82	143	.36	6.6	.85	.30
	Economics	*72*	*65*	*67*	*64*	*56*	*57*	*53*
047.	Minnesota, University of	33	71	100	.20	8.2	.80	.39
	Economics	*60*	*61*	*57*	*49*	*43*	*52*	*59*
048.	Missouri, University of-Columbia	15	21	42	.29	7.0	.79	.33
	Economics	*42*	*43*	*44*	*57*	*52*	*51*	*55*
049.	Nebraska, University of-Lincoln	20	27	35	.07	7.8	.77	.17
	Economics	*47*	*45*	*43*	*37*	*46*	*49*	*44*
050.	New School for Social Research	11	43	214	.06	10.1	.61	.17
	Economics	*37*	*51*	*83*	*36*	*26*	*34*	*44*
051.	New York University	29	38	82	.05	8.3	.55	.05
	Economics	*56*	*49*	*53*	*36*	*42*	*28*	*36*
052.	North Carolina State University-Raleigh	44	41	45	.32	6.9	.90	.24
	Economics and Business	*71*	*50*	*45*	*60*	*53*	*62*	*49*
053.	North Carolina, University of-Chapel Hill	26	55	65	.18	6.3	.86	.42
	Economics	*53*	*55*	*49*	*48*	*58*	*57*	*61*
054.	Northern Illinois University-De Kalb	16	18	30	.06	9.5	.89	.11
	Economics	*43*	*42*	*41*	*36*	*31*	*60*	*40*
055.	Northwestern University	41	53	101	.41	5.6	.81	.36
	Economics	*68*	*54*	*57*	*68*	*64*	*53*	*57*
056.	Notre Dame, University of	12	31	60	.19	5.8	.59	.17
	Economics	*38*	*47*	*48*	*48*	*62*	*32*	*44*
057.	Ohio State University-Columbus	24	30	77	.12	6.3	.82	.35
	Economics	*51*	*46*	*52*	*42*	*58*	*54*	*57*
058.	Oklahoma State University-Stillwater	23	35	26	NA	NA	NA	NA
	Agricultural Economics	*50*	*48*	*41*				
059.	Oklahoma State University-Stillwater	17	28	29	.26	7.0	.78	.28
	Economics and Finance	*44*	*46*	*41*	*55*	*52*	*50*	*51*
060.	Oklahoma, University of-Norman	15	20	23	.08	8.3	.63	.21
	Economics	*42*	*43*	*40*	*38*	*41*	*35*	*47*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 4.1 Program Measures (Raw and Standardized Values) in Economics

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
041.	1.5	0.8	1.0	0.5	-0.1	.00	NA	22	.53	.10	.09	.10	.06
	44	*41*	*46*	*43*	*48*	*42*		*42*	*44*				
042.	3.2	1.6	1.5	1.4	0.2	.13	1162	46	.65	.08	.07	.07	.06
	58	*54*	*65*	*60*	*50*	*51*	*54*	*48*	*52*				
043.	5.0	2.9	1.2	1.9	-0.3	.54	1731	161	.78	.00	.04	.05	.03
	73	*74*	*52*	*70*	*46*	*82*	*60*	*77*	*60*				
044.	2.3	1.2	0.9	1.1	-0.7	.00	370	37	.56	.10	.09	.08	.06
	50	*48*	*41*	*54*	*42*	*42*	*45*	*46*	*46*				
045.	2.9	1.7	1.3	1.1	0.3	.03	2812	119	.69	.08	.07	.07	.07
	55	*56*	*55*	*54*	*52*	*44*	*73*	*67*	*54*				
046.	3.9	2.1	1.1	1.6	1.8	.27	1108	123	.80	.06	.06	.07	.06
	63	*63*	*51*	*64*	*66*	*61*	*53*	*68*	*61*				
047.	4.4	2.5	1.4	1.7	1.2	.24	1847	90	.67	.06	.05	.06	.05
	68	*68*	*61*	*65*	*60*	*60*	*62*	*59*	*53*				
048.	1.3	0.9	0.9	0.4	-0.2	.00	1670	31	.73	.12	.10	.06	.06
	42	*42*	*42*	*41*	*47*	*42*	*60*	*45*	*57*				
049.	1.2	0.7	1.0	0.3	-0.5	.00	1204	39	.60	.12	.11	.07	.05
	40	*40*	*46*	*38*	*44*	*42*	*54*	*47*	*48*				
050.	1.4	0.8	0.9	0.8	NA	.00	NA	14	.55	.12	.10	.08	.06
	42	*41*	*41*	*49*		*42*		*40*	*45*				
051.	3.4	1.6	1.6	1.5	0.5	.14	747	75	.69	.07	.07	.07	.06
	60	*54*	*68*	*61*	*53*	*52*	*49*	*56*	*54*				
052.	1.9	1.3	0.9	0.5	NA	.02	NA	80	.64	.12	.11	.09	.06
	47	*50*	*43*	*43*		*43*		*57*	*51*				
053.	2.8	1.7	1.1	1.1	1.0	.15	265	90	.81	.08	.07	.06	.06
	54	*56*	*50*	*55*	*58*	*53*	*43*	*59*	*62*				
054.	0.7	0.3	0.7	0.2	NA	.00	181	28	.75	.09	.08	.12	.04
	36	*34*	*36*	*36*		*42*	*42*	*44*	*58*				
055.	4.1	2.2	1.5	1.8	0.3	.32	272	76	.68	.06	.05	.07	.04
	65	*64*	*64*	*67*	*52*	*65*	*44*	*56*	*54*				
056.	0.9	0.6	0.9	0.4	-1.3	.00	NA	30	1.00	.12	.09	.07	.06
	38	*39*	*41*	*41*	*36*	*42*		*44*	*74*				
057.	2.3	1.4	1.0	1.0	0.9	.17	1061	60	.75	.09	.07	.07	.06
	50	*51*	*46*	*52*	*57*	*54*	*53*	*52*	*58*				
058.	1.3	0.8	NA	0.2	-1.9	.00	389	37	.57	.19	.19	NA	.04
	42	*42*		*36*	*30*	*42*	*45*	*46*	*46*				
059.	1.4	1.0	1.0	0.6	-1.9	.00	389	12	.35	.11	.11	.05	.06
	43	*44*	*47*	*43*	*30*	*42*	*45*	*40*	*32*				
060.	0.8	0.6	1.0	0.3	-0.6	.00	468	27	.53	.09	.10	.07	.04
	38	*38*	*46*	*38*	*43*	*42*	*46*	*44*	*44*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 4.1 Program Measures (Raw and Standardized Values) in Economics

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
061.	Oregon, University of-Eugene	17	32	35	.13	6.6	.76	.17
	Economics	*44*	*47*	*43*	*43*	*56*	*48*	*44*
062.	Pennsylvania State University	24	26	42	.21	8.8	.73	.21
	Economics	*51*	*45*	*44*	*50*	*38*	*45*	*47*
063.	Pennsylvania, University of	41	87	148	.17	7.0	.83	.22
	Economics	*68*	*67*	*68*	*47*	*52*	*55*	*47*
064.	Pittsburgh, University of	23	54	61	.20	6.6	.84	.20
	Economics	*50*	*55*	*48*	*49*	*55*	*55*	*46*
065.	Princeton University	41	75	76	.32	6.3	.89	.39
	Economics	*68*	*62*	*52*	*60*	*58*	*60*	*59*
066.	Purdue University-West Lafayette	21	45	45	.27	5.3	.85	.40
	Economics	*48*	*52*	*45*	*55*	*66*	*57*	*60*
067.	Rice University	12	23	33	.20	6.4	.73	.27
	Economics	*38*	*44*	*42*	*49*	*57*	*46*	*51*
068.	Rochester, University of	15	38	59	.14	7.1	.78	.46
	Economics	*42*	*49*	*48*	*43*	*51*	*50*	*64*
069.	Rutgers, The State University-New Brunswick	35	27	71	.20	7.0	.92	.42
	Economics	*62*	*45*	*51*	*49*	*52*	*63*	*61*
070.	SUNY at Albany	16	34	67	.08	7.0	.74	.09
	Economics	*43*	*48*	*50*	*39*	*52*	*46*	*38*
071.	SUNY at Binghamton	20	27	61	.14	7.0	.89	.15
	Economics	*47*	*45*	*48*	*44*	*52*	*60*	*43*
072.	SUNY at Stony Brook	18	21	83	.14	5.2	.95	.67
	Economics	*45*	*43*	*53*	*44*	*67*	*66*	*78*
073.	South Carolina, University of-Columbia	16	15	29	.12	8.8	.77	.12
	Economics	*43*	*41*	*41*	*42*	*38*	*49*	*40*
074.	Southern California, University of	26	26	66	.17	8.8	.70	.15
	Economics	*53*	*45*	*50*	*47*	*38*	*42*	*43*
075.	Southern Illinois University-Carbondale	13	21	19	.17	6.8	.72	.11
	Economics	*40*	*43*	*39*	*46*	*54*	*44*	*40*
076.	Southern Methodist University	13	25	30	.14	8.2	.67	.14
	Economics	*40*	*44*	*41*	*44*	*43*	*39*	*42*
077.	Stanford University	32	81	131	.23	7.6	.87	.29
	Economics	*59*	*65*	*64*	*52*	*47*	*59*	*52*
078.	Syracuse University	17	26	55	.18	6.7	.74	.37
	Economics	*44*	*45*	*47*	*47*	*55*	*46*	*58*
079.	Texas A & M University	24	52	58	.18	5.9	.77	.35
	Economics	*51*	*54*	*48*	*47*	*62*	*49*	*57*
080.	Texas, University of-Austin	29	24	84	.15	9.0	.75	.20
	Economics	*56*	*44*	*54*	*45*	*36*	*47*	*46*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 4.1 Program Measures (Raw and Standardized Values) in Economics

Prog No.	Survey Results (08)	(09)	(10)	(11)	University Library (12)	Research Support (13)	(14)	Published Articles (17)	(18)	Survey Ratings Standard Error (08)	(09)	(10)	(11)
061.	1.7	1.2	1.1	0.5	-0.9	.00	NA	19	.53	.11	.10	.08	.06
	45	*48*	*49*	*43*	*40*	*42*		*42*	*44*				
062.	2.0	1.2	1.1	0.6	0.7	.08	1751	80	.75	.09	.09	.07	.06
	47	*47*	*48*	*45*	*56*	*48*	*61*	*57*	*58*				
063.	4.3	2.2	1.4	1.8	0.7	.51	1578	136	.76	.07	.06	.07	.04
	67	*64*	*61*	*67*	*55*	*80*	*59*	*71*	*58*				
064.	2.1	1.3	1.1	0.8	0.1	.00	25	42	.57	.08	.07	.07	.06
	48	*50*	*49*	*49*	*49*	*42*	*41*	*47*	*46*				
065.	4.8	2.6	1.6	1.8	0.9	.20	733	138	.66	.04	.05	.06	.04
	71	*70*	*67*	*68*	*57*	*56*	*49*	*71*	*52*				
066.	2.5	1.6	0.8	0.9	-0.5	.05	3348	35	.48	.08	.07	.07	.07
	51	*54*	*37*	*50*	*44*	*45*	*79*	*46*	*40*				
067.	1.7	1.2	0.7	0.7	-1.4	.00	NA	26	.58	.10	.09	.07	.07
	45	*47*	*36*	*46*	*35*	*42*		*43*	*47*				
068.	3.9	2.3	1.1	1.6	-0.6	.20	NA	57	.53	.08	.06	.07	.06
	64	*65*	*49*	*64*	*43*	*56*		*51*	*44*				
069.	1.8	1.0	1.1	0.7	0.8	.00	800	70	.66	.09	.09	.09	.07
	46	*44*	*50*	*47*	*56*	*42*	*50*	*54*	*52*				
070.	1.1	0.8	1.2	0.4	-1.0	.13	NA	31	.69	.11	.10	.11	.06
	40	*41*	*54*	*41*	*39*	*51*		*45*	*54*				
071.	1.6	1.0	1.0	0.6	NA	.00	56	20	.55	.09	.10	.11	.05
	44	*44*	*46*	*44*		*42*	*41*	*42*	*45*				
072.	2.3	1.4	1.5	1.0	-0.6	.22	92	21	.61	.09	.08	.09	.06
	50	*50*	*63*	*52*	*42*	*58*	*41*	*42*	*49*				
073.	1.3	0.6	1.5	0.4	-0.4	.00	NA	19	.56	.10	.11	.10	.05
	42	*39*	*63*	*40*	*45*	*42*		*42*	*46*				
074.	2.7	1.4	1.8	1.1	0.4	.15	137	75	.65	.08	.08	.05	.06
	54	*51*	*76*	*54*	*52*	*53*	*42*	*56*	*52*				
075.	0.6	0.3	0.9	0.3	-0.2	.00	96	13	.46	.10	.09	.12	.05
	35	*34*	*43*	*39*	*47*	*42*	*41*	*40*	*39*				
076.	1.9	1.1	1.1	0.7	NA	.00	NA	34	.77	.11	.10	.12	.06
	46	*47*	*50*	*46*		*42*		*45*	*59*				
077.	4.8	2.6	1.6	1.8	2.0	.28	1011	121	.94	.04	.05	.06	.04
	72	*70*	*69*	*68*	*68*	*62*	*52*	*67*	*70*				
078.	1.8	1.3	1.1	0.7	-0.3	.06	171	17	.59	.13	.11	.08	.07
	45	*49*	*49*	*46*	*45*	*46*	*42*	*41*	*47*				
079.	2.5	1.5	1.3	1.0	-0.5	.17	1361	58	.75	.09	.08	.08	.06
	52	*53*	*56*	*52*	*44*	*54*	*56*	*51*	*58*				
080.	2.2	1.2	1.1	0.9	1.6	.17	760	62	.62	.08	.08	.07	.06
	49	*48*	*48*	*50*	*64*	*54*	*49*	*52*	*50*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 4.1 Program Measures (Raw and Standardized Values) in Economics

Prog No.	University - Department/Academic Unit	Program Size (01)	Program Size (02)	Program Size (03)	Characteristics of Program Graduates (04)	Characteristics of Program Graduates (05)	Characteristics of Program Graduates (06)	Characteristics of Program Graduates (07)
081.	Tulane University	11	14	16	.47	5.2	.94	.59
	Economics	*37*	*40*	*38*	*74*	*67*	*65*	*73*
082.	Utah, University of-Salt Lake City	21	23	60	.10	6.8	.70	.20
	Economics	*48*	*44*	*48*	*40*	*54*	*42*	*46*
083.	Vanderbilt University	23	39	49	.22	7.6	.75	.11
	Economics and Business Administration	*50*	*49*	*46*	*51*	*48*	*47*	*40*
084.	Virginia Polytechnic Institute & State Univ	15	46	50	.16	5.7	.79	.35
	Economics	*42*	*52*	*46*	*46*	*63*	*51*	*56*
085.	Virginia, University of	30	34	60	.42	7.5	.93	.40
	Economics	*57*	*48*	*48*	*69*	*48*	*64*	*60*
086.	Washington State University-Pullman	19	21	37	.26	8.5	.91	.39
	Economics	*46*	*43*	*43*	*55*	*40*	*63*	*59*
087.	Washington University-Saint Louis	20	46	53	.44	7.4	.87	.31
	Economics	*47*	*52*	*47*	*70*	*49*	*58*	*54*
088.	Washington, University of-Seattle	30	31	57	.29	7.3	.79	.32
	Economics	*57*	*47*	*48*	*57*	*50*	*51*	*54*
089.	Wayne State University	21	23	25	.25	7.8	.60	.08
	Economics	*48*	*44*	*40*	*54*	*45*	*33*	*38*
090.	West Virginia University	24	18	72	.15	7.3	.85	.15
	Business and Economics	*51*	*42*	*51*	*45*	*50*	*57*	*43*
091.	Wisconsin, University of-Madison	45	126	172	.41	6.1	.86	.35
	Economics	*72*	*81*	*73*	*68*	*60*	*58*	*56*
092.	Wisconsin, University of-Milwaukee	17	13	24	.08	8.3	.64	.14
	Economics	*44*	*40*	*40*	*38*	*42*	*37*	*42*
093.	Yale University	51	99	147	.21	6.2	.90	.41
	Economics	*78*	*71*	*68*	*50*	*59*	*62*	*60*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 4.1 Program Measures (Raw and Standardized Values) in Economics

Prog	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
No.	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
081.	1.8	1.0	1.3	0.8	-1.0	.09	NA	21	.82	.11	.10	.11	.07
	45	*45*	*58*	*48*	*39*	*48*		*42*	*63*				
082.	1.4	0.8	1.2	0.4	-0.6	.00	NA	20	.43	.11	.09	.09	.05
	42	*42*	*51*	*40*	*43*	*42*		*42*	*37*				
083.	2.4	1.4	1.0	0.9	-0.7	.04	NA	58	.74	.09	.08	.08	.06
	51	*51*	*45*	*51*	*42*	*45*		*51*	*57*				
084.	2.9	1.6	1.3	1.4	-0.0	.47	829	69	.73	.09	.08	.08	.06
	55	*55*	*55*	*59*	*48*	*76*	*50*	*54*	*57*				
085.	3.0	1.7	1.4	1.2	0.7	.17	263	83	.53	.08	.06	.08	.06
	56	*56*	*59*	*57*	*56*	*54*	*43*	*58*	*44*				
086.	1.0	0.6	1.3	0.3	-0.3	.11	51	26	.53	.15	.13	.16	.05
	39	*38*	*58*	*38*	*46*	*49*	*41*	*43*	*43*				
087.	2.7	1.6	1.0	1.1	-0.4	.10	NA	34	.70	.07	.07	.06	.06
	53	*54*	*44*	*55*	*45*	*49*		*45*	*55*				
088.	2.9	1.8	1.3	1.2	1.5	.10	248	78	.73	.08	.07	.07	.06
	55	*57*	*56*	*56*	*63*	*49*	*43*	*56*	*57*				
089.	1.8	1.1	1.1	0.8	-0.4	.00	190	27	.48	.09	.10	.08	.06
	46	*47*	*49*	*49*	*45*	*42*	*43*	*44*	*40*				
090.	1.1	0.7	1.0	0.4	NA	.04	714	30	.33	.11	.13	.09	.05
	39	*41*	*47*	*40*		*45*	*49*	*44*	*31*				
091.	4.1	2.3	1.5	1.8	1.6	.36	3388	142	.80	.05	.06	.07	.04
	65	*66*	*63*	*67*	*64*	*68*	*80*	*72*	*61*				
092.	1.4	0.8	1.2	0.6	NA	.06	32	32	.59	.10	.09	.08	.05
	43	*41*	*53*	*44*		*46*	*41*	*45*	*47*				
093.	4.7	2.5	0.9	1.8	2.1	.33	1245	145	.65	.05	.06	.06	.04
	71	*68*	*43*	*69*	*69*	*66*	*55*	*73*	*51*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 4.2 Summary Statistics Describing Each Program Measure--Economics

Measure	Number of Programs Evaluated	Mean	Standard Deviation	DECILES 1	2	3	4	5	6	7	8	9
Program Size												
01 Raw Value	93	23	10	13	16	17	19	21	23	26	29	39
Std Value	93	50	10	40	43	44	46	48	50	53	56	66
02 Raw Value	93	41	28	16	21	23	27	30	35	45	53	80
Std Value	93	50	10	41	43	44	45	46	48	52	54	64
03 Raw Value	93	68	45	23	33	42	50	57	61	70	96	134
Std Value	93	50	10	40	42	44	46	48	48	50	56	65
Program Graduates												
04 Raw Value	91	.21	.11	.08	.12	.14	.16	.18	.21	.25	.28	.37
Std Value	91	50	10	38	42	44	45	47	50	54	56	65
05 Raw Value	91	7.3	1.2	9.1	8.5	7.8	7.3	7.0	6.9	6.6	6.3	5.8
Std Value	91	50	10	35	40	46	50	52	53	56	58	62
06 Raw Value	91	.78	.11	.62	.70	.73	.76	.79	.82	.84	.87	.91
Std Value	91	50	10	35	43	45	48	51	54	55	58	62
07 Raw Value	91	.26	.15	.08	.12	.17	.20	.23	.28	.34	.38	.42
Std Value	91	50	10	38	41	44	46	48	51	55	58	61
Survey Results												
08 Raw Value	93	2.3	1.2	1.0	1.3	1.4	1.8	2.1	2.4	2.8	3.2	4.1
Std Value	93	50	10	39	42	42	46	48	51	54	58	65
09 Raw Value	93	1.3	.6	.6	.7	.9	1.1	1.2	1.4	1.6	1.9	2.3
Std Value	93	50	10	38	40	43	46	48	51	54	59	65
10 Raw Value	91	1.1	.3	.8	.9	1.0	1.0	1.1	1.1	1.2	1.4	1.5
Std Value	91	50	10	38	42	46	46	49	49	53	60	64
11 Raw Value	93	.9	.5	.3	.4	.5	.6	.8	.9	1.1	1.4	1.7
Std Value	93	50	10	39	41	43	45	48	50	54	60	66
University Library												
12 Raw Value	75	.1	1.0	-1.1	-.6	-.5	-.4	-.1	.3	.7	.9	1.7
Std Value	75	50	10	38	43	44	45	48	52	55	57	65
Research Support												
13 Raw Value	91	.11	.13	.00	.00	.00	.04	.06	.10	.15	.21	.29
Std Value	91	50	10	42	42	42	45	46	49	53	58	64
14 Raw Value	69	832	863	51	106	187	301	452	776	1063	1404	1800
Std Value	69	50	10	41	42	43	44	46	49	53	57	61
Publication Records												
17 Raw Value	93	52	40	13	20	26	31	35	54	65	78	112
Std Value	93	50	10	40	42	43	45	46	50	53	56	65
18 Raw Value	91	.63	.15	.42	.50	.55	.59	.65	.69	.71	.75	.80
Std Value	91	50	10	36	41	45	47	51	54	55	58	61

NOTE: Standardized values reported in the preceding table have been computed from exact values of the mean and standard deviation and not the rounded values reported here.

TABLE 4.3 Intercorrelations Among Program Measures on 93 Programs in Economics

	Measure															
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	17	18
Program Size																
01		.61	.53	.70	.17	.30	.23	.61	.58	.32	.55	.61	.39	.49	.79	.22
02			.63	.36	.29	.32	.33	.75	.74	.00	.71	.57	.54	.52	.76	.37
03				.05	-.06	.09	.07	.56	.50	.17	.59	.62	.38	.45	.47	.16
Program Graduates																
04					.33	.43	.52	.42	.46	.03	.40	.15	.45	.11	.32	.21
05						.35	.62	.36	.42	.01	.35	.06	.39	.25	.32	.47
06							.59	.31	.34	-.03	.25	.38	.35	.18	.33	.24
07								.48	.53	-.01	.44	.25	.54	.27	.38	.34
Survey Results																
08									.98	.35	.97	.67	.76	.44	.78	.47
09										.30	.93	.60	.76	.44	.75	.47
10											.36	.21	.31	-.05	.26	.12
11												.63	.78	.38	.72	.45
University Library																
12													.45	.41	.67	.41
Research Support																
13														.29	.60	.45
14															.54	.31
Publication Records																
17																.54
18																

NOTE: Since in computing correlation coefficients program data must be available for both of the measures being correlated, the actual number of programs on which each coefficient is based varies.

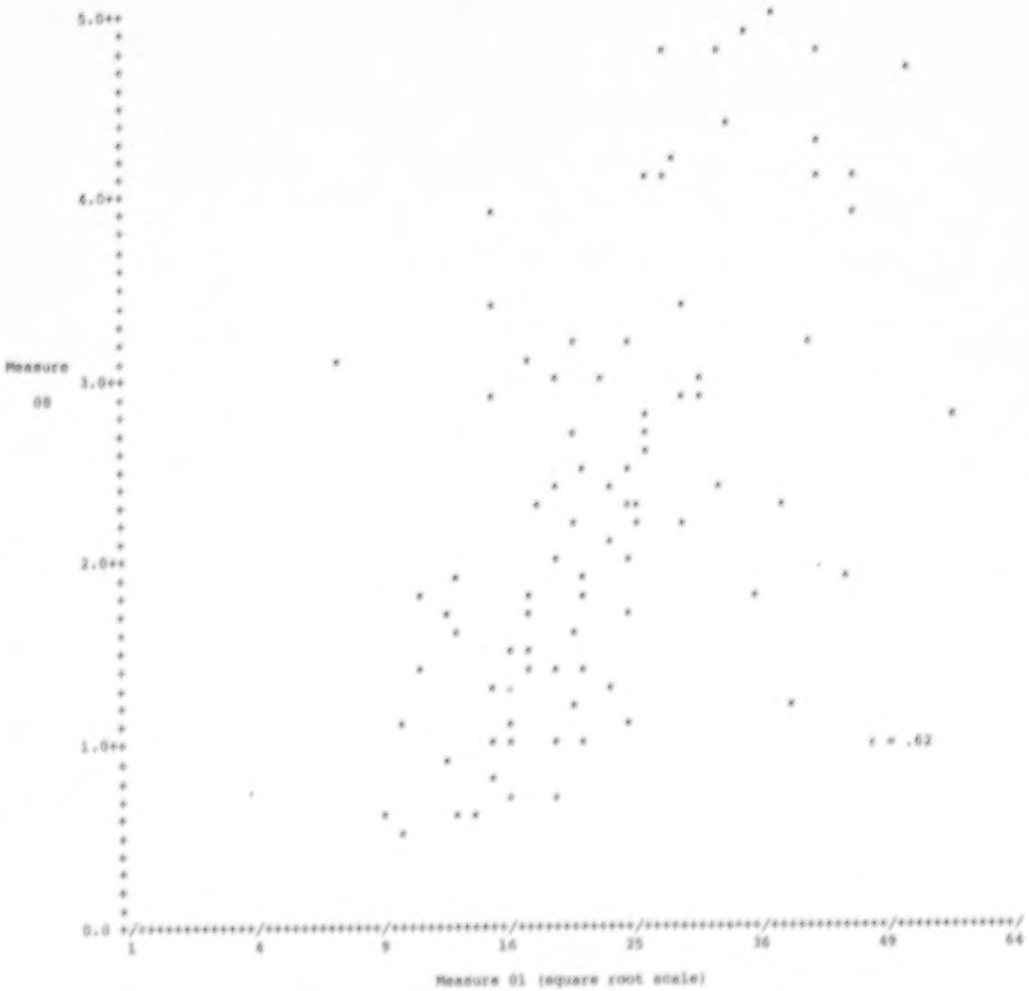


FIGURE 4.1 Mean rating of scholarly quality of faculty (measure 08) versus number of faculty members (measure 01)--93 programs in economics.

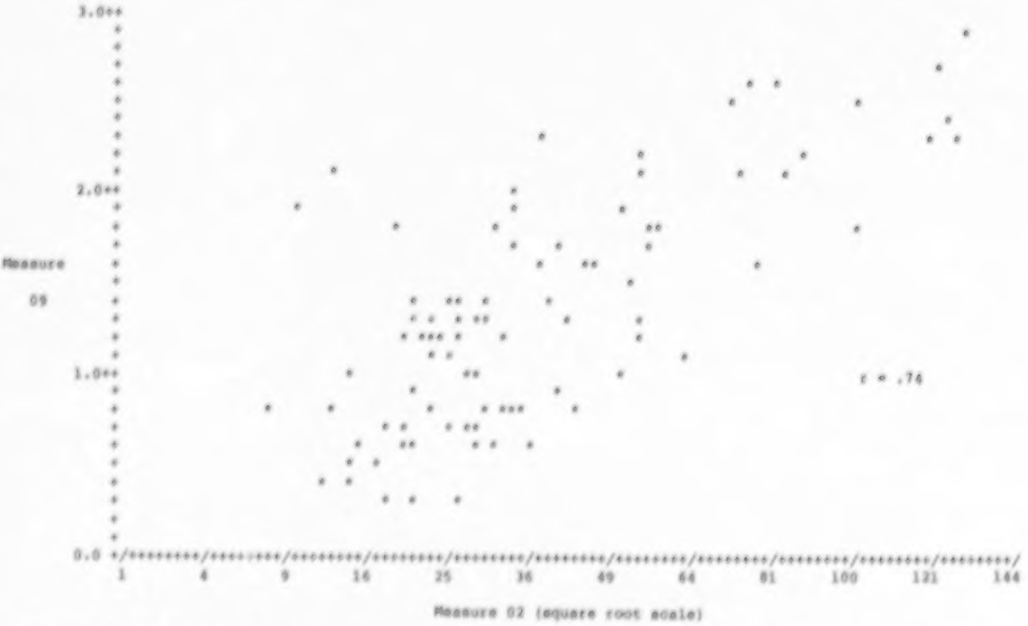


FIGURE 4.2 Mean rating of program effectiveness in educating research scholars/scientists (measure 09) versus number of graduates in last five years (measure 02)--93 programs in economics.

TABLE 4.4 Characteristics of Survey Participants in Economics

	Respondents	
	N	%
Field of Specialization		
Econometrics	17	9
Economics	155	84
Other/Unknown	13	7
Faculty Rank		
Professor	101	55
Associate Professor	52	28
Assistant Professor	32	17
Year of Highest Degree		
Pre-1950	7	4
1950-59	27	15
1960-69	68	37
Post-1969	82	44
Unknown	1	1
Evaluator Selection		
Nominated by Institution	167	90
Other	18	10
Survey Form		
With Faculty Names	169	91
Without Names	16	9
Total Evaluators	185	100

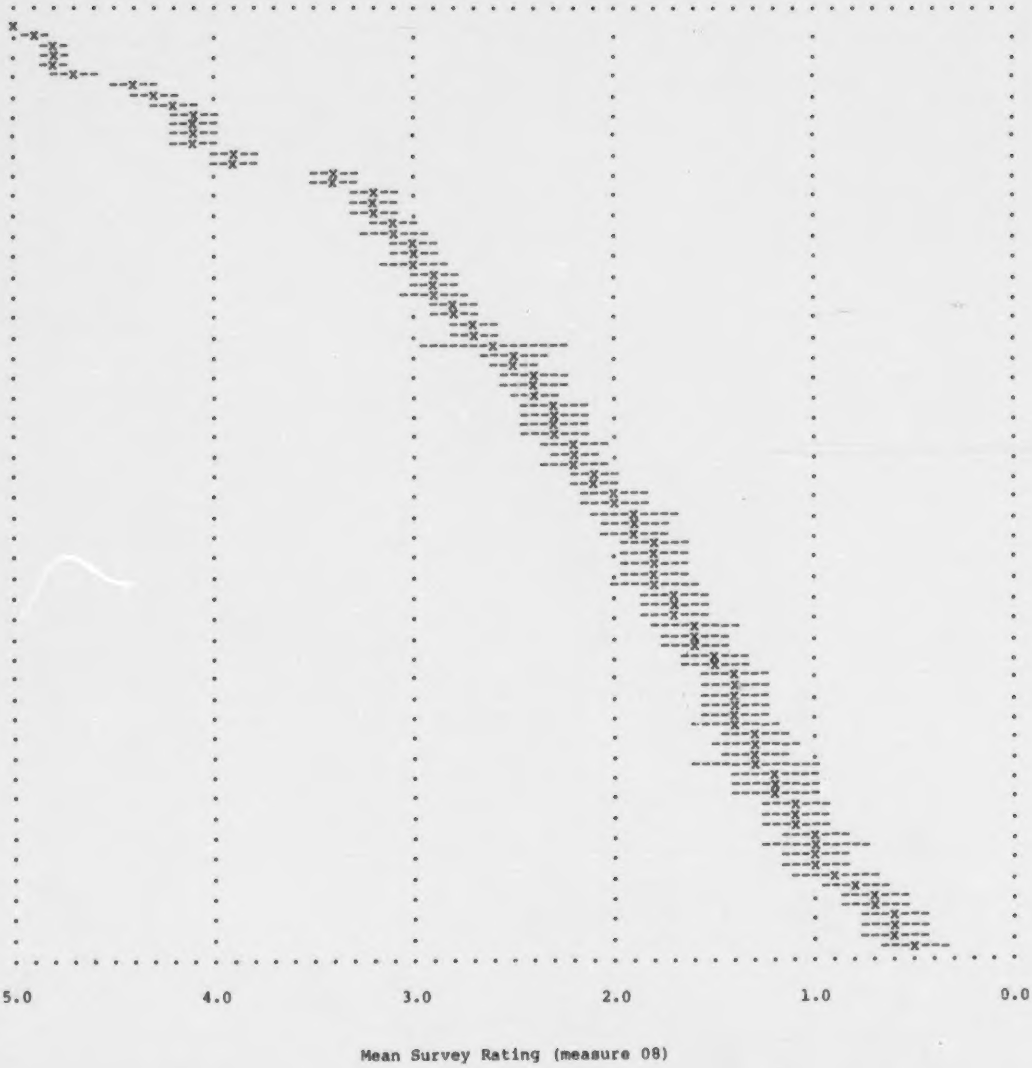


FIGURE 4.3 Mean rating of scholarly quality of faculty in 93 programs in economics.

NOTE: Programs are listed in sequence of mean rating, with the highest-rated program appearing at the top of the page. The broken lines (---) indicate a confidence interval of ±1.5 standard errors around the reported mean (x) of each program.

V
Geography Programs

In this chapter 49 research-doctorate programs in geography are assessed. These programs, according to the information supplied by their universities, have accounted for 762 doctoral degrees awarded during the FY1976-80 period.[1] On the average, 22 full-time and part-time students intending to earn doctorates were enrolled in a program in December 1980, with an average faculty size of 13 members.[2] Four programs were initiated since 1970, and no two programs are located in the same university. In addition to the 49 institutions represented in this discipline, another 3 were initially identified as meeting the criteria[3] for inclusion in the assessment:

Arizona State University--Tempe
Oklahoma State University--Stillwater
University of Pennsylvania

Geography programs at these three institutions have not been included in the evaluations in this discipline, since in each case the study coordinator either indicated that the institution did not at that time have a research-doctorate program in geography or failed to provide the information requested by the committee.

Before examining individual program results presented in Table 5.1, the reader is urged to refer to Chapter II, in which each of the 16 measures used in the assessment is discussed. Summary statistics describing every measure are given in Table 5.2. For nine of the measures, data are reported for at least 43 of the 49 geography programs. For measures 04-07, which pertain to characteristics of the program graduates, data are presented for only approximately three-fourths of the programs; the other fourth had too few graduates on which to base statistics.[4] As mentioned in Chapter II, data on the total university expenditures for research (measure 14) are not available in geography. With respect to measure 13, the fraction of faculty with research grants from the Alcohol, Drug Abuse, and Mental Health Administration, the National Institutes of Health, or the National Science Foundation, and measure 18, the fraction of program faculty with one or more published articles during the 1978-80 period, data are reported for approximately three-fourths of the geography programs.[5]

---

[1] Data from the NRC's Survey of Earned Doctorates indicate that 728 research doctorates in geography were awarded by U.S. universities between FY1976 and FY1980. Since the NRC figure is based on field of degree and not department, it may exclude some doctorates included in the numbers reported by the institutional coordinators.
[2] See the reported means for measures 03 and 01 in Table 5.2.
[3] As mentioned in Chapter I, the primary criterion for inclusion was that a university had awarded at least 1 doctorate in geography during the FY1976-78 period.

Intercorrelations among the 15 measures (Pearson product-moment coefficients) are given in Table 5.3. Of particular note are the high positive correlations of reputational survey ratings (08, 09) with both the total number of 1978-80 articles by program faculty (measure 17) and the total number of FY1976-80 program graduates (measure 02). Figure 5.1 illustrates the relation between the mean rating of the scholarly quality of faculty (measure 08) and the number of faculty members (measure 01) for each of 49 programs in geography. Figure 5.2 plots the mean rating of program effectiveness (measure 09) against the total number of FY1976-80 program graduates (measure 02). Although in both figures there is a significant positive correlation between program size and reputational rating, it is quite apparent that some of the smaller programs received high mean ratings and that some of the larger programs received low mean ratings.

Table 5.4 describes the 106 faculty members who participated in the evaluation of geography programs. These individuals constituted 71 percent of those asked to respond to the survey in this discipline and 17 percent of the faculty population in the 49 research-doctorate programs being evaluated.[6] As mentioned in Chapter II, the timing and circumstances of the survey of evaluators in geography differed from the surveys of other disciplines since geography was added at a late date to the list of disciplines to be included in the assessment; survey forms were mailed to geographers in September 1981. More than three-fifths of the survey participants had earned their highest degree prior to 1970, and a majority held the rank of full professor.

To assist the reader in interpreting results of the survey evaluations, estimated standard errors have been computed for mean ratings of the scholarly quality of faculty in 49 geography programs (and are given in Table 5.1). For each program the mean rating and an associated "confidence interval" of 1.5 standard errors are illustrated in

---

[4] As mentioned in Chapter II, data for measures 04-07 are not reported if they are based on the survey responses of fewer than 10 FY1975-79 program graduates.

[5] Data for measures 13 and 18 are not reported for any programs that had fewer than 10 faculty members.

[6] See Table 2.3 in Chapter II.

Figure 5.3 (listed in order of highest to lowest mean rating). In comparing two programs, if their confidence intervals do not overlap, one may conclude that there is a significant difference in their mean ratings at a .05 level of significance.[7] From this figure it is also apparent that one should have somewhat more confidence in the accuracy of the mean ratings of higher-rated programs than lower-rated programs. This generalization results primarily from the fact that evaluators are not as likely to be familiar with the less prestigious programs, and consequently the mean ratings of these programs are usually based on fewer survey responses.

---

[7] See pp. 30-32 for a discussion of the interpretation of mean ratings and associated confidence intervals.

TABLE 5.1 Program Measures (Raw and Standardized Values) in Geography

Prog No.	University - Department/Academic Unit	Program Size (01)	Program Size (02)	Program Size (03)	Characteristics of Program Graduates (04)	Characteristics of Program Graduates (05)	Characteristics of Program Graduates (06)	Characteristics of Program Graduates (07)
001.	Arizona, University of-Tucson	11	1	12	NA	NA	NA	NA
	*Geography and Regional Development**	*46*	*34*	*44*				
002.	Boston University	13	5	23	NA	NA	NA	NA
	Geography	*50*	*38*	*50*				
003.	California, University of-Berkeley	13	29	36	.42	7.9	.74	.29
	Geography	*50*	*65*	*59*	*61*	*55*	*52*	*51*
004.	California, University of-Davis	8	5	18	NA	NA	NA	NA
	Geography	*39*	*38*	*47*				
005.	California, University of-Los Angeles	23	33	60	.31	8.1	.57	.29
	Geography	*71*	*69*	*74*	*54*	*54*	*39*	*51*
006.	California, University of-Riverside	5	10	8	.17	8.0	.58	.08
	Earth Sciences	*33*	*44*	*41*	*44*	*55*	*40*	*35*
007.	Chicago, University of	9	13	24	.43	10.5	.86	.43
	Geography	*41*	*47*	*51*	*62*	*37*	*60*	*62*
008.	Cincinnati, University of	8	11	12	.20	7.5	.50	.20
	Geography	*39*	*45*	*44*	*46*	*58*	*34*	*44*
009.	Clark University	21	37	37	.44	8.3	.94	.33
	Geography	*67*	*74*	*59*	*63*	*53*	*66*	*54*
010.	Colorado, University of	13	23	76	.15	6.8	.63	.26
	Geography	*50*	*58*	*84*	*43*	*63*	*43*	*49*
011.	Columbia University	12	9	39	NA	NA	NA	NA
	Geography	*48*	*43*	*61*				
012.	Denver, University of	5	4	2	NA	NA	NA	NA
	Geography	*33*	*37*	*37*				
013.	Florida, University of-Gainesville	18	12	14	.43	8.0	.53	.07
	Geography	*61*	*46*	*45*	*62*	*55*	*36*	*34*
014.	Georgia, University of-Athens	15	18	11	.17	8.8	.83	.33
	Geography	*54*	*53*	*43*	*44*	*49*	*58*	*54*
015.	Hawaii, University of	23	20	22	.13	12.5	.75	.13
	Geography	*71*	*55*	*50*	*41*	*23*	*52*	*38*
016.	Illinois, University-Urbana/Champaign	19	23	25	.39	7.6	.85	.52
	Geography	*63*	*58*	*52*	*59*	*57*	*60*	*69*
017.	Indiana State University-Terre Haute	19	7	23	.18	8.3	.55	.09
	Geography	*63*	*41*	*50*	*45*	*53*	*37*	*35*
018.	Indiana University-Bloomington	15	17	30	.00	7.5	.83	.33
	Geography	*54*	*52*	*55*	*32*	*58*	*58*	*54*
019.	Iowa, University of-Iowa City	10	21	25	.15	7.1	.54	.23
	Geography	*43*	*56*	*52*	*43*	*61*	*37*	*46*
020.	Johns Hopkins University	4	18	35	.25	6.3	.83	.17
	Geography and Environmental Engineering	*31*	*53*	*58*	*50*	*67*	*58*	*41*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 5.1 Program Measures (Raw and Standardized Values) in Geography

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
001.	2.4	1.3	1.1	1.1	0.9	.09	NA	13	.55	.09	.08	.08	.06
	46	*44*	*53*	*46*	*56*	*46*		*46*	*52*				
002.	2.6	1.4	1.4	1.1	-0.4	.08	NA	18	.31	.10	.07	.08	.06
	48	*46*	*64*	*48*	*42*	*44*		*51*	*37*				
003.	4.2	2.4	1.0	1.6	2.2	.39	NA	23	.62	.09	.06	.07	.05
	66	*67*	*50*	*64*	*70*	*72*		*55*	*57*				
004.	2.3	1.3	1.1	0.9	0.6	NA	NA	23	NA	.10	.08	.06	.06
	45	*43*	*54*	*42*	*53*			*55*					
005.	4.0	2.2	1.3	1.6	2.0	.13	NA	42	.65	.09	.06	.06	.05
	64	*63*	*61*	*64*	*68*	*49*		*73*	*59*				
006.	1.5	1.1	0.6	0.8	-1.0	NA	NA	2	NA	.14	.10	.07	.07
	36	*38*	*39*	*39*	*35*			*36*					
007.	4.3	2.3	0.4	1.7	0.9	NA	NA	30	NA	.09	.06	.05	.05
	67	*64*	*32*	*67*	*56*			*62*					
008.	2.1	1.4	0.8	1.1	-0.2	NA	NA	4	NA	.10	.07	.07	.06
	43	*45*	*44*	*47*	*43*			*38*					
009.	3.8	2.2	1.0	1.6	NA	.14	NA	22	.33	.09	.06	.06	.05
	62	*62*	*52*	*63*		*50*		*55*	*39*				
010.	3.0	1.8	1.3	1.2	-0.9	.39	NA	19	.46	.08	.07	.07	.05
	53	*54*	*61*	*51*	*37*	*72*		*52*	*47*				
011.	2.1	1.2	0.6	0.9	1.7	.08	NA	4	.25	.09	.07	.07	.07
	42	*42*	*39*	*43*	*65*	*45*		*38*	*33*				
012.	1.2	0.9	1.0	0.7	NA	NA	NA	5	NA	.12	.10	.07	.07
	32	*35*	*51*	*35*				*39*					
013.	2.0	1.2	0.8	0.8	0.8	.06	NA	5	.22	.10	.08	.09	.07
	41	*42*	*44*	*38*	*55*	*42*		*39*	*32*				
014.	3.2	1.9	1.2	1.3	0.4	.13	NA	29	.80	.08	.07	.07	.06
	55	*55*	*58*	*53*	*51*	*49*		*61*	*69*				
015.	2.9	1.8	1.2	1.0	-0.1	.17	NA	27	.48	.10	.07	.06	.06
	52	*54*	*58*	*46*	*45*	*53*		*59*	*48*				
016.	3.4	2.0	1.6	1.5	2.0	.21	NA	37	.63	.08	.06	.07	.05
	58	*59*	*68*	*61*	*67*	*56*		*68*	*58*				
017.	1.6	1.0	1.0	0.7	NA	.05	NA	13	.26	.12	.09	.07	.06
	37	*36*	*51*	*35*		*42*		*46*	*34*				
018.	2.9	1.8	1.3	1.2	0.9	.13	NA	21	.53	.10	.07	.08	.06
	52	*54*	*59*	*52*	*56*	*49*		*54*	*52*				
019.	3.3	2.1	0.7	1.3	0.3	.30	NA	11	.50	.08	.06	.06	.06
	57	*60*	*39*	*55*	*49*	*64*		*45*	*49*				
020.	3.5	1.9	0.9	1.4	-0.4	NA	NA	15	NA	.12	.09	.06	.06
	59	*56*	*46*	*56*	*42*			*48*					

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 5.1 Program Measures (Raw and Standardized Values) in Geography

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
021.	Kansas, University of	18	27	25	.27	10.9	.64	.33
	Geography and Meteorology	*61*	*63*	*52*	*51*	*34*	*44*	*54*
022.	Kent State University	10	13	20	.15	9.0	.69	.23
	Geography	*43*	*47*	*49*	*43*	*48*	*48*	*46*
023.	Kentucky, University of	11	7	7	NA	NA	NA	NA
	*Geography**	*46*	*41*	*40*				
024.	Louisiana State University-Baton Rouge	17	12	8	.18	7.3	.64	.55
	Geography and Anthropology	*58*	*46*	*41*	*45*	*59*	*44*	*71*
025.	Maryland, University of-College Park	15	9	60	NA	NA	NA	NA
	Geography	*54*	*43*	*74*				
026.	Michigan State University-East Lansing	17	29	34	.21	9.2	.82	.18
	Geography	*58*	*65*	*57*	*47*	*47*	*57*	*43*
027.	Michigan, University of-Ann Arbor	13	21	35	.50	6.8	.40	.25
	Geography	*50*	*56*	*58*	*67*	*63*	*26*	*48*
028.	Minnesota, University of	20	28	26	.38	8.8	.79	.29
	Geography	*65*	*64*	*52*	*59*	*49*	*55*	*51*
029.	Nebraska, University of-Lincoln	17	12	6	.36	9.0	.85	.39
	Geography	*58*	*46*	*40*	*57*	*48*	*59*	*59*
030.	North Carolina, University of-Chapel Hill	11	15	8	.14	11.5	.77	.08
	Geography	*46*	*49*	*41*	*42*	*30*	*53*	*34*
031.	Northern Colorado, University of-Greeley	8	7	4	NA	NA	NA	NA
	*Geography**	*39*	*41*	*38*				
032.	Northwestern University	5	8	4	NA	NA	NA	NA
	Geography	*33*	*42*	*38*				
033.	Ohio State University-Columbus	14	31	26	.14	6.3	.90	.59
	Geography	*52*	*67*	*52*	*42*	*67*	*63*	*74*
034.	Oklahoma, University of-Norman	12	22	41	.11	9.0	.65	.19
	Geography	*48*	*57*	*62*	*40*	*48*	*45*	*43*
035.	Oregon State University-Corvallis	12	28	14	.18	9.8	.74	.26
	Geography	*48*	*64*	*45*	*44*	*42*	*51*	*49*
036.	Oregon, University of-Eugene	9	19	9	.14	8.0	.57	.21
	Geography	*41*	*54*	*42*	*42*	*55*	*39*	*45*
037.	Pennsylvania State University	13	16	15	.53	7.8	.81	.31
	Geography	*50*	*50*	*45*	*69*	*56*	*57*	*53*
038.	Pittsburgh, University of	7	18	12	.23	9.5	.64	.21
	Geography	*37*	*53*	*44*	*48*	*44*	*44*	*45*
039.	Rutgers, The State University-New Brunswick	20	8	20	NA	NA	NA	NA
	Geography	*65*	*42*	*49*				
040.	SUNY at Buffalo	12	3	20	NA	NA	NA	NA
	*Geography**	*48*	*36*	*49*				

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 5.1 Program Measures (Raw and Standardized Values) in Geography

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
021.	3.3	2.0	1.1	1.3	0.1	.06	NA	15	.56	.08	.06	.07	.06
	56	58	53	53	47	42		48	53				
022.	1.6	1.0	0.9	0.8	-1.8	.10	NA	9	.40	.10	.08	.06	.06
	37	37	46	38	27	46		43	43				
023.	2.1	1.2	1.3	1.1	-0.1	.00	NA	24	.73	.10	.08	.08	.07
	42	40	61	47	45	37		56	64				
024.	3.2	1.9	1.0	1.0	-0.3	.00	NA	14	.53	.10	.06	.05	.07
	55	57	50	45	42	37		47	51				
025.	2.3	1.4	1.1	1.1	0.2	.07	NA	6	.27	.09	.07	.06	.07
	45	45	53	47	49	43		40	35				
026.	2.8	1.7	0.9	1.2	0.3	.12	NA	20	.53	.09	.07	.07	.07
	51	52	47	51	50	48		53	51				
027.	2.9	1.7	0.1	1.6	1.8	.08	NA	14	.54	.12	.07	.04	.05
	52	51	22	63	65	44		47	52				
028.	4.6	2.6	1.3	1.8	1.2	.20	NA	43	.70	.07	.06	.06	.05
	71	70	59	69	59	55		74	62				
029.	2.7	1.7	1.4	1.1	-0.5	.24	NA	10	.35	.08	.06	.07	.07
	49	51	62	47	41	59		44	40				
030.	2.6	1.6	1.1	1.1	1.0	.00	NA	11	.73	.09	.07	.06	.06
	49	50	54	47	57	37		45	64				
031.	0.8	0.7	0.9	0.4	NA	NA	NA	8	NA	.10	.08	.06	.06
	28	30	47	25				42					
032.	2.6	1.2	0.2	1.5	0.3	NA	NA	6	NA	.13	.08	.05	.06
	48	41	25	59	49			40					
033.	3.9	2.4	0.8	1.6	0.9	.43	NA	37	.71	.09	.06	.07	.05
	63	66	43	63	56	76		68	63				
034.	2.3	1.4	1.0	1.1	-0.6	.17	NA	17	.25	.09	.07	.09	.06
	45	45	50	48	40	52		50	33				
035.	2.0	1.4	1.0	0.9	NA	.00	NA	5	.33	.10	.09	.06	.06
	42	45	51	40		37		39	39				
036.	2.3	1.4	0.8	1.0	-0.9	NA	NA	1	NA	.10	.08	.06	.07
	45	45	44	44	36			35					
037.	4.3	2.4	1.2	1.7	0.7	.23	NA	30	.54	.07	.06	.06	.05
	68	66	57	66	54	58		62	52				
038.	1.4	0.9	0.5	0.8	0.1	NA	NA	1	NA	.10	.08	.06	.06
	35	36	33	39	47			35					
039.	2.9	1.6	1.2	1.2	0.8	.05	NA	24	.55	.10	.06	.07	.06
	51	49	58	50	55	42		56	53				
040.	3.2	1.7	1.6	1.3	0.3	.08	NA	27	.67	.09	.07	.07	.06
	55	52	70	54	49	45		59	60				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 5.1 Program Measures (Raw and Standardized Values) in Geography

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
041.	Southern Illinois University-Carbondale	12	12	12	.08	9.2	.83	.42
	Geography	*48*	*46*	*44*	*38*	*47*	*58*	*61*
042.	Syracuse University	13	24	22	.32	8.3	.62	.23
	Geography	*50*	*59*	*50*	*54*	*53*	*42*	*46*
043.	Tennessee, University of-Knoxville	12	8	17	.54	9.3	.85	.15
	Geography	*48*	*42*	*47*	*70*	*45*	*59*	*40*
044.	Texas A & M University	8	2	17	NA	NA	NA	NA
	Geography	*39*	*35*	*47*				
045.	Texas, University of-Austin	12	7	10	.46	11.3	.73	.27
	Geography	*48*	*41*	*42*	*64*	*32*	*50*	*50*
046.	Utah, University of-Salt Lake City	10	5	5	NA	NA	NA	NA
	Geography	*43*	*38*	*39*				
047.	Washington, University of-Seattle	15	14	14	.21	9.8	.68	.26
	Geography	*54*	*48*	*45*	*47*	*42*	*47*	*49*
048.	Wisconsin, University of-Madison	19	30	55	.31	8.5	.83	.49
	Geography	*63*	*66*	*71*	*53*	*51*	*58*	*66*
049.	Wisconsin, University of-Milwaukee	14	11	11	.00	10.0	1.00	.30
	Geography	*52*	*45*	*43*	*32*	*41*	*70*	*52*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 5.1 Program Measures (Raw and Standardized Values) in Geography

Prog	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
No.	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
041.	1.9	1.1	0.6	0.9	-0.2	.17	NA	7	.33	.11	.09	.08	.07
	40	*38*	*38*	*40*	*44*	*52*		*41*	*39*				
042.	3.6	2.0	1.1	1.5	-0.3	.23	NA	29	.54	.08	.05	.06	.06
	59	*59*	*53*	*60*	*42*	*58*		*61*	*52*				
043.	2.2	1.4	1.3	1.0	-0.4	.17	NA	13	.50	.10	.07	.07	.06
	44	*45*	*56*	*45*	*42*	*52*		*46*	*49*				
044.	2.2	1.2	1.1	1.1	-0.5	NA	NA	6	NA	.11	.09	.08	.07
	44	*41*	*53*	*46*	*41*			*40*					
045.	2.5	1.4	0.7	1.2	1.6	.00	NA	13	.50	.09	.07	.06	.06
	48	*44*	*40*	*49*	*64*	*37*		*46*	*49*				
046.	1.7	1.0	1.0	0.7	-0.6	.00	NA	6	.50	.09	.08	.06	.06
	38	*37*	*49*	*34*	*39*	*37*		*40*	*49*				
047.	3.6	2.2	0.9	1.5	1.5	.20	NA	30	.67	.08	.06	.06	.06
	59	*62*	*48*	*60*	*62*	*55*		*62*	*60*				
048.	4.1	2.5	0.9	1.6	1.6	.11	NA	26	.74	.08	.05	.07	.05
	66	*68*	*47*	*65*	*63*	*47*		*58*	*65*				
049.	3.0	1.8	1.2	1.3	NA	.29	NA	18	.57	.08	.06	.05	.06
	53	*53*	*56*	*53*		*63*		*51*	*54*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 5.2 Summary Statistics Describing Each Program Measure--Geography

Measure	Number of Programs Evaluated	Mean	Standard Deviation	DECILES								
				1	2	3	4	5	6	7	8	9
Program Size												
01 Raw Value	49	13	5	7	9	11	12	13	13	15	17	19
Std Value	49	50	10	37	41	46	48	50	50	54	58	63
02 Raw Value	49	16	9	5	7	9	12	13	17	20	23	29
Std Value	49	50	10	38	41	43	46	47	52	55	58	65
03 Raw Value	49	22	16	6	9	12	14	19	22	25	34	39
Std Value	49	50	10	40	42	44	45	48	50	52	57	61
Program Graduates												
04 Raw Value	36	.26	.14	.10	.14	.15	.18	.21	.26	.33	.41	.45
Std Value	36	50	10	39	41	42	44	46	50	55	61	64
05 Raw Value	36	8.7	1.4	11.0	9.8	9.2	9.0	8.5	8.2	8.0	7.5	7.0
Std Value	36	50	10	34	42	46	48	51	53	55	58	62
06 Raw Value	36	.72	.14	.54	.57	.64	.67	.74	.78	.83	.83	.85
Std Value	36	50	10	37	39	44	46	51	54	58	58	59
07 Raw Value	36	.28	.13	.09	.17	.21	.23	.26	.29	.32	.33	.45
Std Value	36	50	10	35	42	45	46	48	51	53	54	63
Survey Results												
08 Raw Value	49	2.8	.9	1.6	2.0	2.2	2.4	2.7	2.9	3.2	3.5	4.0
Std Value	49	50	10	37	41	44	46	49	52	55	59	64
09 Raw Value	49	1.6	.5	1.0	1.2	1.3	1.4	1.6	1.7	1.9	2.1	2.3
Std Value	49	50	10	37	41	43	45	50	52	56	60	64
10 Raw Value	49	1.0	.3	.6	.8	.9	.9	1.0	1.1	1.1	1.2	1.3
Std Value	49	50	10	37	44	47	47	50	54	54	57	60
11 Raw Value	49	1.2	.3	.8	.9	1.0	1.1	1.1	1.2	1.3	1.5	1.6
Std Value	49	50	10	38	41	45	48	48	51	54	61	64
University Library												
12 Raw Value	43	.4	.9	-.9	-.5	-.3	-.1	.3	.6	.9	1.1	1.7
Std Value	43	50	10	36	40	43	45	49	53	56	58	65
Research Support												
13 Raw Value	38	.14	.11	.00	.05	.07	.09	.12	.14	.17	.22	.29
Std Value	38	50	10	37	42	44	45	48	50	53	57	64
Publication Records												
17 Raw Value	49	17	11	4	6	9	13	15	18	23	27	30
Std Value	49	50	10	38	40	43	46	48	51	55	59	62
18 Raw Value	38	.51	.16	.26	.33	.43	.50	.53	.54	.57	.66	.72
Std Value	38	50	10	34	39	45	49	51	52	54	59	63

NOTE: Standardized values reported in the preceding table have been computed from exact values of the mean and standard deviation and not the rounded values reported here.

TABLE 5.3 Intercorrelations Among Program Measures on 49 Programs in Geography

	Measure															
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	17	18
Program Size																
01		.48	.39	.15	-.17	.15	.25	.46	.51	.44	.35	.40	.00	N/A	.56	.06
02			.52	.09	.19	.13	.30	.60	.68	.00	.57	.30	.42	N/A	.46	.22
03				.07	.34	-.06	.11	.42	.43	.14	.41	.23	.30	N/A	.33	-.11
Program Graduates																
04					.05	-.02	.05	.36	.29	-.07	.43	.43	-.07	N/A	.23	.01
05						-.23	.23	.16	.18	-.07	.21	-.02	.43	N/A	.06	.02
06							.44	.36	.35	.39	.29	.12	.27	N/A	.37	.25
07								.51	.53	.10	.47	.29	.27	N/A	.45	.37
Survey Results																
08									.98	.19	.94	.52	.52	N/A	.78	.59
09										.22	.89	.50	.56	N/A	.77	.57
10											.04	-.05	.06	N/A	.45	.24
11												.59	.51	N/A	.73	.58
University Library																
12													.05	N/A	.48	.38
Research Support																
13														N/A	.42	.17
14															N/A	N/A
Publication Records																
17																.67
18																

NOTE: Since in computing correlation coefficients program data must be available for both of the measures being correlated, the actual number of programs on which each coefficient is based varies.

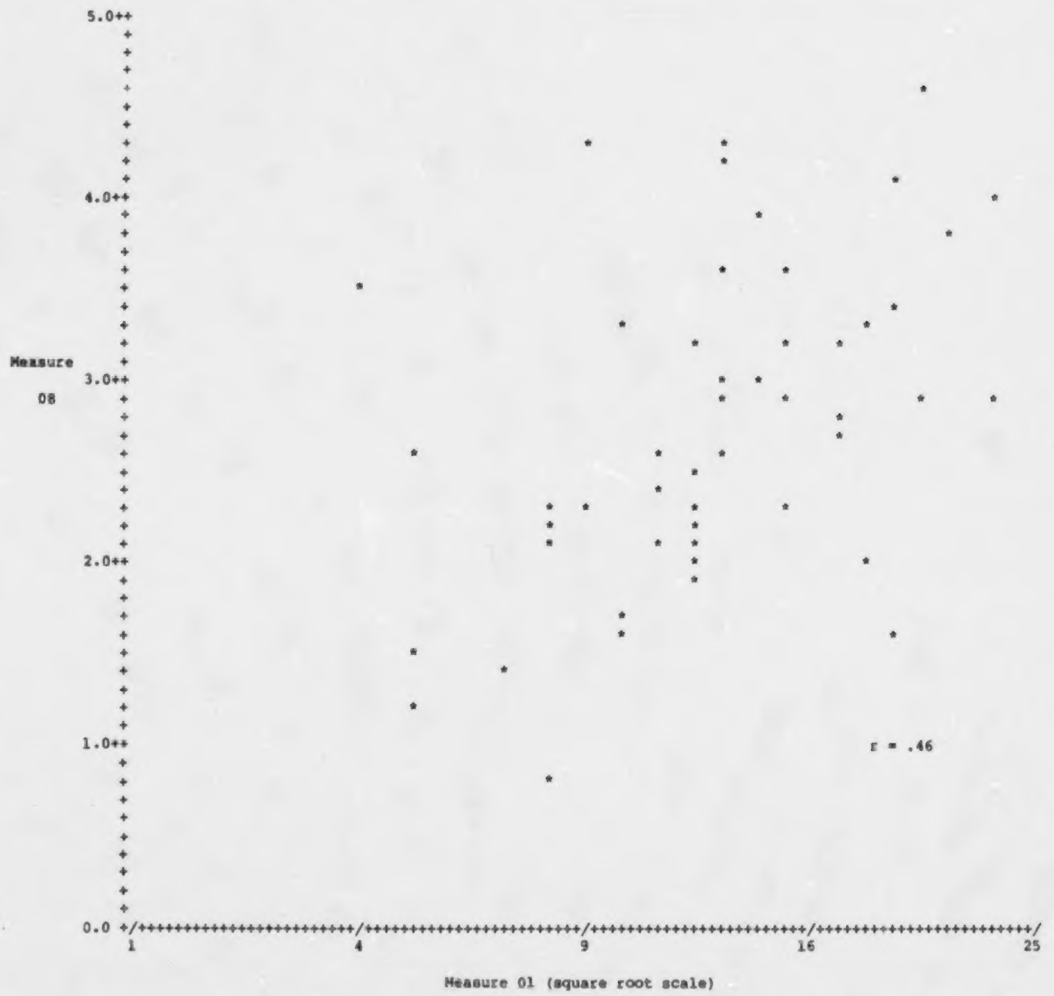


FIGURE 5.1 Mean rating of scholarly quality of faculty (measure 08) versus number of faculty members (measure 01)--49 programs in geography.

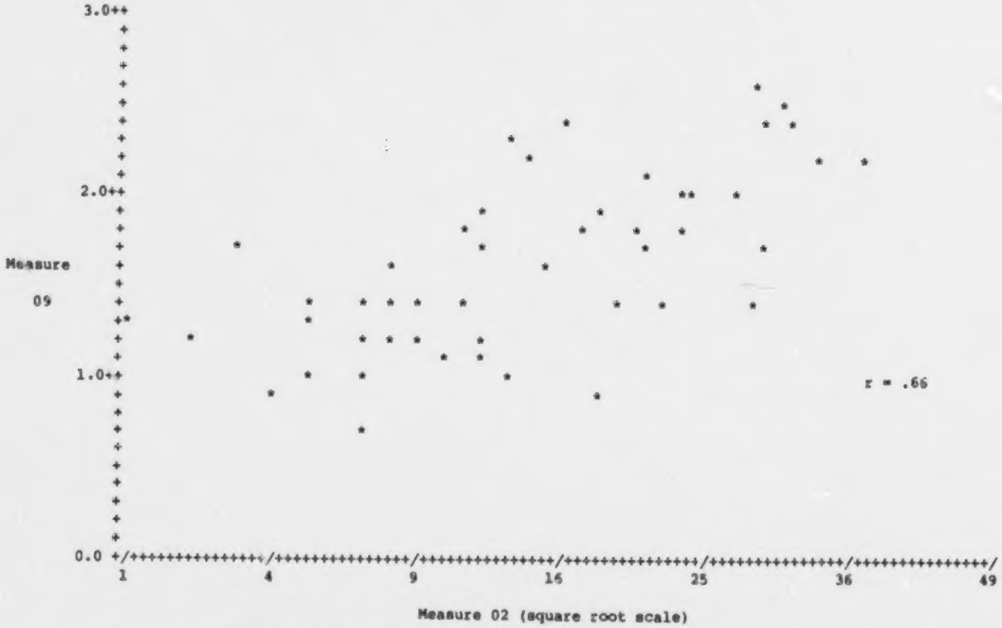


FIGURE 5.2 Mean rating of program effectiveness in educating research scholars/scientists (measure 09) versus number of graduates in last five years (measure 02)--49 programs in geography.

TABLE 5.4 Characteristics of Survey Participants in Geography

	Respondents	
	N	%
Field of Specialization		
Geography	104	98
Other/Unknown	2	2
Faculty Rank		
Professor	55	52
Associate Professor	32	30
Assistant Professor	19	18
Year of Highest Degree		
Pre-1950	2	2
1950-59	24	23
1960-69	41	39
Post-1969	39	37
Evaluator Selection		
Nominated by Institution	103	97
Other	3	3
Survey Form		
With Faculty Names	92	87
Without Names	14	13
Total Evaluators	106	100

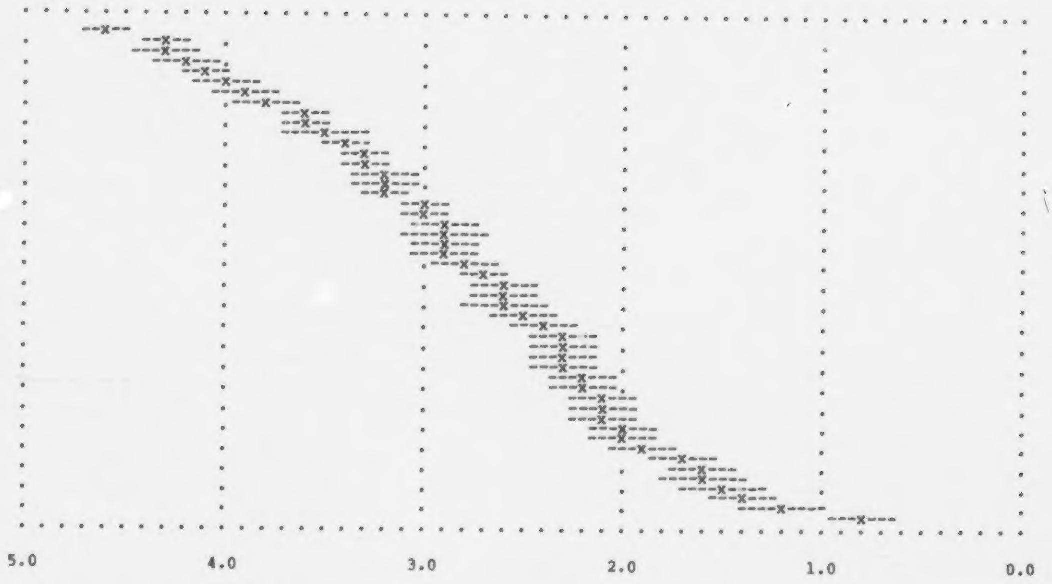


FIGURE 5.3 Mean rating of scholarly quality of faculty in 49 programs in geography.

NOTE: Programs are listed in sequence of mean rating, with the highest-rated program appearing at the top of the page. The broken lines (---) indicate a confidence interval of ±1.5 standard errors around the reported mean (x) of each program.

VI

History Programs

In this chapter 102 research-doctorate programs in history are assessed. These programs, according to the information supplied by their universities, have accounted for 3,877 doctoral degrees awarded during the FY1976-80 period--approximately 89 percent of the aggregate number of history doctorates earned from U.S. universities in this five-year span.[1] On the average, 51 full-time and part-time students intending to earn doctorates were enrolled in a program in December 1980, with an average faculty size of 28 members.[2] Two programs were initiated since 1970, and no two programs are located in the same university. In addition to the 102 institutions represented in this discipline, another 6 were initially identified as meeting the criteria[3] for inclusion in the assessment:

University of New Mexico--Albuquerque
University of North Dakota--Grand Forks
Yeshiva University
Graduate Theological Union--California
Illinois State University--Normal
Saint John's University

The last three institutions chose not to participate in the assessment in any discipline. History programs at the other three institutions have not been included in the evaluations in this discipline, since in each case the study coordinator either indicated that the institution did not at that time have a research-doctorate program in history or failed to provide the information requested by the committee.

---

[1] Data from the NRC's Survey of Earned Doctorates indicate that 4,341 research doctorates in history were awarded by U.S. universities between FY1976 and FY1980.

[2] See the reported means for measures 03 and 01 in Table 6.2.

[3] As mentioned in Chapter I, the primary criterion for inclusion was that a university had awarded at least 11 doctorates in history during the FY1976-78 period.

Before examining individual program results presented in Table 6.1, the reader is urged to refer to Chapter II, in which each of the 16 measures used in the assessment is discussed. Summary statistics describing every measure are given in Table 6.2. For 13 of the measures, data are reported for at least 98 of the 102 history programs. For measure 12, a composite index of the size of a university library, data are available for 75 programs. The programs not evaluated on this measure are typically smaller--in terms of faculty size and graduate student enrollment--than other history programs. Were data on measure 12 available for all 102 programs, it is likely that their reported mean would be appreciably lower (and that some of the correlations of this measure with others would be higher). As mentioned in Chapter II, data on the fraction of program faculty with research grants from the Alcohol, Drug Abuse, and Mental Health Administration, the National Institutes of Health, or the National Science Foundation (measure 13) and data on the total university expenditures for research (measure 14) are not presented for programs in history.

Intercorrelations among the 14 measures (Pearson product-moment coefficients) are given in Table 6.3. Of particular note are the high positive correlations of the measures of program size (01, 02, and 03) with the total published articles by program faculty (17) and the reputational survey ratings (08, 09). Also of interest are the high positive correlations of university library size (12) with reputational survey ratings (08 and 09). Figure 6.1 illustrates the relation between the mean rating of the scholarly quality of faculty (measure 08) and the number of faculty members (measure 01) for each of 102 programs in history. Figure 6.2 plots the mean rating of program effectiveness (measure 09) against the total number of FY1976-80 program graduates (measure 02). Although in both figures there is a significant positive correlation between program size and reputational rating, it is quite apparent that some of the smaller programs received high mean ratings and that some of the larger programs received low mean ratings.

Table 6.4 describes the 166 faculty members who participated in the evaluation of history programs. These individuals constituted 54 percent of those asked to respond to the survey in this discipline and 6 percent of the faculty population in the 102 research-doctorate programs being evaluated.* More than two-thirds of the survey participants had earned their highest degree prior to 1970, and a majority held the rank of full professor.

To assist the reader in interpreting results of the survey evaluations, estimated standard errors have been computed for mean ratings of the scholarly quality of faculty in 102 history programs (and are given in Table 6.1). For each program the mean rating and an associated "confidence interval" of 1.5 standard errors are illustrated in Figure 6.3 (listed in order of highest to lowest mean rating). In comparing two programs, if their confidence intervals do not overlap, one may conclude that there is a significant difference in their mean ratings at a .05 level of significance.[5] From this figure it is also apparent that one should have somewhat more confidence in the accuracy of the mean ratings of higher-rated programs than lower-rated programs. This generalization results primarily from the fact that evaluators are not as likely to be familiar with the less prestigious programs, and consequently the mean ratings of these programs are usually based on fewer survey responses.

---

*See Table 2.3 in Chapter II.

---

[5] See pp. 30-32 for a discussion of the interpretation of mean ratings and associated confidence intervals.

TABLE 6.1 Program Measures (Raw and Standardized Values) in History

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
001.	American University	12	19	28	.05	12.3	.70	.05
	History	*38*	*44*	*45*	*35*	*29*	*62*	*38*
002.	Arizona, University of-Tucson	24	10	28	.29	8.8	.39	.08
	History	*47*	*41*	*45*	*51*	*53*	*34*	*41*
003.	Arkansas, University-Fayetteville	20	7	20	NA	NA	NA	NA
	*History**	*44*	*40*	*44*				
004.	Auburn University	18	10	21	.20	9.5	.60	.20
	History	*42*	*41*	*44*	*46*	*48*	*54*	*55*
005.	Boston College	28	14	29	.39	7.4	.42	.17
	History	*50*	*43*	*45*	*58*	*63*	*37*	*51*
006.	Boston University	28	30	46	.19	9.4	.48	.13
	History	*50*	*48*	*49*	*45*	*49*	*43*	*47*
007.	Brandeis University	16	19	41	.43	7.5	.57	.14
	History of Am Civilization/Comparative Hist	*41*	*44*	*48*	*61*	*62*	*51*	*48*
008.	Brown University	28	29	54	.54	7.3	.56	.28
	History	*50*	*47*	*51*	*68*	*63*	*50*	*64*
009.	Bryn Mawr College	13	7	15	.50	5.2	.30	.10
	History	*38*	*40*	*43*	*66*	*78*	*27*	*43*
010.	CUNY-Graduate School	40	43	97	.29	11.2	.37	.09
	History	*60*	*52*	*60*	*52*	*36*	*33*	*43*
011.	California, University of-Berkeley	53	123	134	.46	10.2	.59	.34
	History	*70*	*76*	*67*	*63*	*43*	*53*	*70*
012.	California, University of-Davis	27	20	22	.24	8.0	.45	.10
	History	*49*	*44*	*44*	*48*	*58*	*40*	*43*
013.	California, University of-Irvine	18	14	40	.33	8.0	.42	.25
	History	*42*	*43*	*48*	*55*	*58*	*37*	*60*
014.	California, University of-Los Angeles	65	141	209	.30	9.2	.51	.25
	History	*80*	*82*	*83*	*52*	*50*	*45*	*60*
015.	California, University of-Riverside	14	9	18	NA	NA	NA	NA
	History	*39*	*41*	*43*				
016.	California, University of-San Diego	24	15	39	.16	7.5	.50	.20
	History	*47*	*43*	*48*	*43*	*62*	*45*	*55*
017.	California, University of-Santa Barbara	38	77	60	.21	8.8	.47	.12
	History	*58*	*62*	*52*	*47*	*53*	*42*	*45*
018.	Carnegie-Mellon University	11	33	59	.26	9.3	.60	.20
	History and Philosophy	*37*	*48*	*52*	*50*	*50*	*54*	*55*
019.	Case Western Reserve University	9	21	9	.17	10.0	.60	.13
	History	*35*	*45*	*41*	*44*	*44*	*54*	*47*
020.	Catholic University of America	16	26	26	.09	11.8	.61	.03
	History	*41*	*46*	*45*	*38*	*32*	*54*	*35*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 6.1 Program Measures (Raw and Standardized Values) in History

Prog No.	Survey Results (08)	(09)	(10)	(11)	University Library (12)	Research Support (13)	(14)	Published Articles (17)	(18)	Survey Ratings Standard Error (08)	(09)	(10)	(11)
001.	1.6	1.0	0.9	0.6	NA	NA	NA	11	.42	.14	.11	.09	.06
	40	*39*	*43*	*42*				*40*	*39*				
002.	2.5	1.5	1.7	0.9	0.9	NA	NA	34	.50	.11	.12	.09	.07
	49	*50*	*81*	*49*	*57*			*47*	*45*				
003.	1.4	0.9	1.1	0.5	NA	NA	NA	12	.30	.13	.10	.14	.07
	38	*38*	*52*	*40*				*40*	*31*				
004.	1.1	0.6	1.1	0.3	NA	NA	NA	16	.56	.13	.14	.07	.05
	36	*33*	*51*	*35*				*41*	*49*				
005.	1.4	1.0	1.0	0.5	NA	NA	NA	38	.61	.14	.11	.13	.06
	38	*39*	*46*	*39*				*49*	*52*				
006.	2.8	1.5	1.1	0.9	-0.4	NA	NA	70	.79	.10	.09	.09	.07
	52	*50*	*53*	*49*	*45*			*59*	*65*				
007.	3.7	2.1	1.1	1.3	NA	NA	NA	27	.63	.11	.07	.08	.07
	61	*60*	*54*	*60*				*45*	*53*				
008.	3.9	2.2	1.4	1.3	-1.1	NA	NA	65	.82	.10	.08	.09	.08
	62	*63*	*66*	*58*	*38*			*57*	*67*				
009.	2.5	1.6	1.0	0.7	NA	NA	NA	11	.46	.16	.12	.10	.08
	49	*52*	*50*	*44*				*40*	*42*				
010.	4.0	2.0	1.2	1.3	NA	NA	NA	54	.50	.10	.08	.12	.08
	63	*58*	*55*	*60*				*54*	*45*				
011.	4.8	2.6	1.0	1.8	2.2	NA	NA	112	.70	.05	.08	.06	.05
	71	*69*	*49*	*70*	*70*			*73*	*59*				
012.	2.9	1.8	1.3	1.0	0.6	NA	NA	36	.63	.09	.08	.07	.07
	53	*54*	*61*	*53*	*55*			*48*	*54*				
013.	2.0	1.1	1.1	0.8	NA	NA	NA	1	.06	.15	.12	.13	.08
	44	*42*	*52*	*47*				*36*	*14*				
014.	4.1	2.2	1.1	1.6	2.0	NA	NA	113	.59	.07	.06	.08	.06
	64	*62*	*53*	*65*	*68*			*73*	*51*				
015.	1.6	1.0	0.7	0.7	-1.0	NA	NA	16	.57	.13	.11	.10	.07
	41	*39*	*31*	*45*	*39*			*41*	*50*				
016.	3.3	1.9	1.6	1.2	-0.0	NA	NA	24	.50	.11	.07	.09	.07
	56	*56*	*78*	*55*	*48*			*44*	*45*				
017.	3.3	1.9	1.3	1.2	-0.1	NA	NA	66	.58	.10	.08	.09	.07
	57	*58*	*61*	*57*	*47*			*58*	*50*				
018.	2.2	1.4	1.0	0.7	NA	NA	NA	18	.46	.16	.13	.11	.07
	46	*48*	*48*	*45*				*42*	*42*				
019.	1.8	1.3	0.7	0.8	-1.3	NA	NA	7	NA	.16	.13	.13	.07
	42	*45*	*35*	*46*	*36*			*38*					
020.	1.9	1.2	0.8	0.5	NA	NA	NA	27	.81	.14	.13	.15	.08
	43	*43*	*37*	*39*				*45*	*67*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 6.1 Program Measures (Raw and Standardized Values) in History

Prog No.	University - Department/Academic Unit	Program Size (01)	Program Size (02)	Program Size (03)	Characteristics of Program Graduates (04)	Characteristics of Program Graduates (05)	Characteristics of Program Graduates (06)	Characteristics of Program Graduates (07)
021.	Chicago, University of	46	127	125	.40	9.6	.59	.23
	History	*65*	*77*	*65*	*59*	*47*	*53*	*58*
022.	Cincinnati, University of	28	21	42	.28	9.0	.83	.11
	History	*50*	*45*	*48*	*51*	*51*	*74*	*45*
023.	Claremont Graduate School	19	16	57	.35	10.5	.47	.05
	History	*43*	*43*	*51*	*56*	*41*	*42*	*38*
024.	Colorado, University of	26	19	35	.10	12.0	.50	.05
	History	*49*	*44*	*47*	*39*	*30*	*45*	*38*
025.	Columbia University	52	143	305	.46	9.3	.59	.25
	History	*69*	*82*	*99*	*63*	*50*	*53*	*60*
026.	Connecticut, University of-Storrs	32	20	28	.18	11.5	.46	.14
	History	*53*	*44*	*45*	*44*	*34*	*41*	*47*
027.	Cornell University-Ithaca	27	37	43	.55	7.7	.64	.32
	History	*49*	*50*	*48*	*69*	*61*	*57*	*68*
028.	Delaware, University of-Newark	35	25	32	.29	9.8	.66	.14
	History	*56*	*46*	*46*	*52*	*46*	*58*	*48*
029.	Denver, University of	15	11	10	.07	13.5	.50	.00
	History	*40*	*42*	*41*	*37*	*20*	*45*	*32*
030.	Duke University	35	69	83	.29	6.5	.60	.13
	History	*56*	*60*	*57*	*52*	*69*	*54*	*47*
031.	Emory University	20	25	28	.44	10.0	.46	.04
	History	*44*	*46*	*45*	*62*	*44*	*41*	*36*
032.	Florida State University-Tallahassee	24	34	26	.18	9.5	.57	.07
	History	*47*	*49*	*45*	*44*	*48*	*51*	*40*
033.	Florida, University of-Gainesville	30	23	37	.48	8.9	.41	.09
	History	*52*	*45*	*47*	*64*	*52*	*36*	*42*
034.	Fordham University	17	9	31	.10	12.5	.60	.10
	History	*42*	*41*	*46*	*39*	*27*	*54*	*43*
035.	George Washington University	18	17	34	.08	12.8	.69	.15
	History	*42*	*44*	*46*	*37*	*25*	*62*	*49*
036.	Georgetown University	16	34	43	.33	9.8	.53	.03
	History	*41*	*49*	*48*	*55*	*46*	*47*	*35*
037.	Georgia, University of-Athens	26	24	11	.17	9.0	.71	.17
	History	*49*	*46*	*42*	*43*	*51*	*63*	*51*
038.	Harvard University	29	128	123	.35	8.3	.78	.39
	History	*51*	*78*	*65*	*56*	*56*	*69*	*76*
039.	Hawaii, University of	36	28	39	.39	10.2	.70	.17
	History	*57*	*47*	*48*	*58*	*43*	*62*	*52*
040.	Howard University	17	16	33	.24	8.7	.41	.06
	History	*42*	*43*	*46*	*48*	*54*	*37*	*39*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 6.1 Program Measures (Raw and Standardized Values) in History

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
021.	4.5	2.3	1.1	1.6	0.9	NA	NA	149	.91	.08	.08	.09	.06
	68	65	53	67	57			85	74				
022.	2.3	1.4	1.1	0.9	-0.2	NA	NA	43	.61	.10	.10	.10	.08
	47	47	51	49	46			50	52				
023.	2.5	1.4	1.2	0.7	NA	NA	NA	11	.47	.12	.11	.12	.08
	49	47	55	45				40	43				
024.	2.1	1.2	0.9	0.6	-0.9	NA	NA	34	.50	.13	.12	.11	.07
	45	44	42	43	40			47	45				
025.	4.5	2.4	0.8	1.6	1.7	NA	NA	97	.62	.08	.07	.07	.06
	68	66	37	67	65			68	53				
026.	2.6	1.6	1.2	0.7	-0.5	NA	NA	33	.41	.11	.09	.10	.07
	50	50	57	44	44			47	38				
027.	3.9	2.2	0.9	1.5	1.6	NA	NA	52	.78	.09	.07	.07	.07
	62	63	41	64	64			53	64				
028.	2.7	1.6	1.5	0.9	NA	NA	NA	69	.77	.11	.10	.10	.08
	50	51	72	49				59	64				
029.	1.0	0.7	1.1	0.4	NA	NA	NA	10	.53	.13	.10	.10	.06
	35	34	51	38				39	47				
030.	3.7	2.1	1.3	1.4	0.3	NA	NA	82	.66	.09	.07	.12	.08
	60	60	60	62	52			63	56				
031.	2.8	1.8	1.2	1.0	-0.6	NA	NA	40	.55	.13	.10	.10	.07
	52	55	55	51	42			49	48				
032.	1.9	1.2	1.1	0.5	-0.4	NA	NA	23	.38	.14	.10	.05	.06
	43	44	52	41	44			44	36				
033.	2.1	1.3	1.1	0.7	0.8	NA	NA	26	.53	.15	.11	.12	.06
	45	44	54	45	56			45	47				
034.	1.5	0.9	0.9	0.4	NA	NA	NA	21	.59	.15	.11	.15	.06
	39	38	42	37				43	51				
035.	1.8	1.2	0.9	0.6	NA	NA	NA	21	.50	.13	.09	.11	.07
	42	43	43	42				43	45				
036.	1.4	1.2	0.9	0.6	-0.6	NA	NA	8	.44	.13	.12	.12	.08
	38	44	41	41	42			39	40				
037.	2.6	1.5	1.1	0.9	0.4	NA	NA	54	.73	.09	.09	.08	.08
	50	48	53	49	53			54	61				
038.	4.8	2.4	0.7	1.9	3.0	NA	NA	61	.69	.05	.07	.08	.04
	70	67	34	73	78			56	58				
039.	2.1	1.2	1.4	0.4	-0.1	NA	NA	33	.50	.17	.14	.15	.07
	45	43	66	37	47			47	45				
040.	1.1	0.8	1.0	0.4	-0.4	NA	NA	14	.41	.13	.14	.12	.06
	36	35	45	36	65			41	39				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 6.1 Program Measures (Raw and Standardized Values) in History

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
041.	Illinois, University of-Chicago Circle	35	23	49	.33	11.3	.50	.15
	History	*56*	*45*	*50*	*55*	*36*	*45*	*49*
042.	Illinois, University-Urbana/Champaign	34	45	54	.23	9.2	.65	.16
	History	*55*	*52*	*51*	*48*	*50*	*58*	*50*
043.	Indiana University-Bloomington	53	95	135	.37	9.4	.66	.17
	History	*70*	*67*	*68*	*57*	*49*	*59*	*51*
044.	Iowa, University of-Iowa City	27	41	61	.28	11.4	.49	.16
	History	*49*	*51*	*52*	*51*	*35*	*43*	*50*
045.	Johns Hopkins University	18	45	61	.38	6.7	.57	.31
	History	*42*	*52*	*52*	*58*	*67*	*51*	*68*
046.	Kansas, University of	40	32	66	.47	9.5	.56	.14
	History	*60*	*48*	*53*	*64*	*48*	*50*	*48*
047.	Kent State University	25	34	38	.14	8.0	.75	.19
	History	*48*	*49*	*47*	*42*	*58*	*67*	*53*
048.	Kentucky, University of	22	32	34	.24	10.5	.68	.08
	History	*46*	*48*	*46*	*49*	*41*	*60*	*41*
049.	Louisiana State University-Baton Rouge	22	24	27	.14	10.0	.52	.15
	History	*46*	*46*	*45*	*42*	*44*	*46*	*49*
050.	Loyola University of Chicago	25	16	23	.06	9.8	.59	.06
	History	*48*	*43*	*44*	*36*	*46*	*52*	*39*
051.	Maine, University of-Orono	15	20	11	.07	8.4	.67	.07
	History	*40*	*44*	*42*	*37*	*56*	*60*	*40*
052.	Maryland, University of-College Park	53	55	127	.17	9.4	.37	.20
	History	*70*	*55*	*66*	*44*	*49*	*33*	*54*
053.	Massachusetts, University of-Amherst	16	26	21	.04	10.2	.41	.14
	History	*41*	*46*	*44*	*35*	*43*	*36*	*47*
054.	Miami University-Ohio	21	29	11	.04	7.4	.54	.08
	History	*45*	*47*	*42*	*35*	*63*	*48*	*41*
055.	Michigan State University-East Lansing	32	33	33	.30	9.9	.50	.16
	History	*53*	*48*	*46*	*52*	*45*	*45*	*50*
056.	Michigan, University of-Ann Arbor	61	128	101	.41	8.5	.54	.20
	History	*77*	*78*	*60*	*60*	*55*	*48*	*55*
057.	Minnesota, University of	40	67	51	.15	11.2	.50	.23
	History	*60*	*59*	*50*	*42*	*36*	*45*	*58*
058.	Mississippi State University-Starkville	12	14	10	.05	8.1	.74	.21
	History	*38*	*43*	*41*	*36*	*58*	*66*	*56*
059.	Missouri, University of-Columbia	24	30	34	.20	9.3	.63	.08
	History	*47*	*48*	*46*	*46*	*49*	*56*	*41*
060.	Nebraska, University of-Lincoln	22	24	12	.10	8.3	.63	.32
	History	*46*	*46*	*42*	*39*	*57*	*56*	*68*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 6.1 Program Measures (Raw and Standardized Values) in History

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
041.	2.9	1.6	1.2	1.1	NA	NA	NA	54	.60	.10	.09	.09	.07
	53	*52*	*57*	*55*				*54*	*52*				
042.	3.3	2.0	1.0	1.3	2.0	NA	NA	72	.71	.10	.08	.08	.06
	56	*58*	*47*	*58*	*68*			*60*	*59*				
043.	3.9	2.2	1.4	1.6	0.9	NA	NA	103	.76	.08	.06	.07	.06
	63	*63*	*67*	*65*	*58*			*70*	*63*				
044.	3.4	2.0	1.1	1.3	0.3	NA	NA	41	.82	.08	.07	.07	.07
	58	*58*	*51*	*59*	*51*			*50*	*67*				
045.	4.3	2.4	1.1	1.6	-0.4	NA	NA	66	.83	.11	.07	.07	.06
	66	*67*	*53*	*65*	*45*			*58*	*68*				
046.	2.9	1.7	1.2	0.9	0.1	NA	NA	48	.63	.11	.08	.10	.08
	52	*52*	*55*	*49*	*49*			*52*	*53*				
047.	2.3	1.2	1.1	0.8	-1.8	NA	NA	33	.60	.13	.11	.09	.08
	47	*44*	*52*	*46*	*31*			*47*	*52*				
048.	2.4	1.5	1.1	0.8	-0.1	NA	NA	57	.77	.13	.08	.10	.07
	48	*49*	*52*	*46*	*48*			*55*	*64*				
049.	2.2	1.5	0.7	0.7	-0.3	NA	NA	15	.46	.13	.11	.12	.07
	46	*50*	*32*	*45*	*45*			*41*	*42*				
050.	1.3	0.9	1.1	0.5	NA	NA	NA	21	.52	.15	.12	.06	.07
	38	*37*	*51*	*38*				*43*	*46*				
051.	1.2	1.0	1.0	0.6	NA	NA	NA	21	.60	.14	.09	.07	.08
	37	*39*	*46*	*41*				*43*	*52*				
052.	3.1	1.7	1.2	1.2	0.2	NA	NA	76	.57	.12	.09	.10	.08
	54	*53*	*59*	*56*	*50*			*61*	*49*				
053.	2.3	1.4	0.9	0.8	-0.7	NA	NA	14	.50	.13	.12	.13	.07
	47	*48*	*45*	*46*	*41*			*41*	*45*				
054.	1.1	1.1	NA	0.4	-0.8	NA	NA	28	.52	.13	.16	NA	.07
	35	*40*		*38*	*41*			*45*	*46*				
055.	2.5	1.6	0.8	1.0	0.3	NA	NA	44	.63	.11	.09	.09	.06
	49	*51*	*38*	*52*	*52*			*50*	*53*				
056.	4.5	2.4	1.1	1.6	1.8	NA	NA	127	.71	.08	.06	.08	.07
	68	*67*	*53*	*65*	*66*			*78*	*59*				
057.	3.4	2.0	1.1	1.3	1.2	NA	NA	84	.70	.10	.07	.09	.07
	57	*59*	*53*	*58*	*60*			*64*	*59*				
058.	0.8	0.7	1.2	0.4	NA	NA	NA	9	.42	.14	.13	.11	.07
	33	*34*	*57*	*38*				*39*	*39*				
059.	2.9	1.8	1.0	1.0	-0.2	NA	NA	44	.58	.10	.08	.09	.08
	53	*54*	*49*	*52*	*47*			*50*	*51*				
060.	2.3	1.5	0.9	0.9	-0.5	NA	NA	38	.73	.09	.09	.09	.08
	47	*49*	*41*	*49*	*44*			*49*	*61*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 6.1 Program Measures (Raw and Standardized Values) in History

Prog No.	University - Department/Academic Unit	Program Size (01)	(02)	(03)	Characteristics of Program Graduates (04)	(05)	(06)	(07)
061.	New Hampshire, University of	17	7	11	NA	NA	NA	NA
	History	*42*	*40*	*42*				
062.	New York University	32	92	60	.16	11.5	.59	.10
	History	*53*	*67*	*52*	*43*	*34*	*52*	*43*
063.	North Carolina, University of-Chapel Hill	45	79	100	.19	8.4	.62	.21
	History	*64*	*63*	*60*	*45*	*55*	*55*	*55*
064.	North Texas State University-Denton	18	25	13	.00	8.3	.22	.00
	History	*42*	*46*	*42*	*32*	*56*	*19*	*32*
065.	Northwestern University	30	45	50	.46	8.8	.58	.26
	History	*52*	*52*	*50*	*63*	*53*	*52*	*61*
066.	Notre Dame, University of	14	27	36	.29	8.0	.58	.26
	History	*39*	*47*	*47*	*52*	*58*	*52*	*61*
067.	Ohio State University-Columbus	41	62	47	.13	9.5	.47	.10
	History	*61*	*57*	*49*	*41*	*48*	*41*	*43*
068.	Oklahoma State University-Stillwater	18	21	23	.00	7.5	.63	.19
	*History**	*42*	*45*	*44*	*32*	*62*	*56*	*53*
069.	Oklahoma, University of-Norman	22	21	27	.25	9.7	.62	.14
	History	*46*	*45*	*45*	*49*	*47*	*55*	*48*
070.	Oregon, University of-Eugene	24	10	15	.36	9.0	.40	.00
	History	*47*	*41*	*43*	*57*	*51*	*36*	*32*
071.	Pennsylvania State University	12	17	12	.33	8.3	.56	.17
	History	*38*	*44*	*42*	*55*	*56*	*50*	*51*
072.	Pennsylvania, University of	49	47	89	.36	8.4	.63	.16
	History	*67*	*53*	*58*	*56*	*56*	*56*	*50*
073.	Pittsburgh, University of	25	30	25	.26	8.8	.60	.27
	History	*48*	*48*	*45*	*50*	*53*	*54*	*62*
074.	Princeton University	36	64	48	.57	8.6	.75	.33
	History	*57*	*58*	*49*	*71*	*54*	*67*	*70*
075.	Rice University	12	13	18	.47	8.0	.59	.35
	History	*38*	*42*	*43*	*64*	*58*	*52*	*72*
076.	Rochester, University of	15	30	57	.40	8.5	.43	.11
	History	*40*	*48*	*51*	*59*	*55*	*38*	*45*
077.	Rutgers, The State University-New Brunswick	60	57	153	.19	8.5	.60	.22
	History	*76*	*56*	*71*	*45*	*55*	*54*	*57*
078.	SUNY at Binghamton	20	34	76	.10	7.8	.38	.07
	History	*44*	*49*	*55*	*39*	*60*	*34*	*40*
079.	SUNY at Buffalo	27	42	73	.31	9.4	.53	.21
	History	*49*	*51*	*55*	*53*	*49*	*47*	*55*
080.	SUNY at Stony Brook	29	26	41	.17	8.7	.48	.04
	History	*51*	*46*	*48*	*44*	*54*	*43*	*37*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 6.1 Program Measures (Raw and Standardized Values) in History

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
061.	1.9	1.0	1.2	0.6	NA	NA	NA	27	.59	.12	.10	.10	.06
	43	39	57	42				45	51				
062.	3.1	1.8	1.3	1.2	0.5	NA	NA	39	.53	.09	.07	.08	.07
	54	56	61	55	53			49	47				
063.	3.8	2.2	1.1	1.4	1.0	NA	NA	68	.58	.08	.07	.08	.07
	62	63	52	62	58			58	50				
064.	1.3	0.8	1.3	0.4	NA	NA	NA	15	.44	.15	.12	.12	.06
	37	36	60	38				41	41				
065.	3.8	2.1	1.1	1.3	0.3	NA	NA	39	.63	.08	.08	.10	.07
	61	61	54	60	51			49	54				
066.	1.8	1.2	0.8	0.8	-1.3	NA	NA	19	.64	.11	.10	.10	.08
	43	44	38	47	35			42	55				
067.	2.9	1.7	1.0	1.1	0.9	NA	NA	74	.68	.09	.07	.08	.07
	52	54	46	53	57			60	58				
068.	1.1	0.6	0.7	0.4	-1.9	NA	NA	10	.33	.14	.11	.11	.06
	36	33	34	38	29			39	33				
069.	2.4	1.4	1.2	0.8	-0.6	NA	NA	12	.32	.12	.10	.11	.08
	48	48	55	48	43			40	32				
070.	2.1	1.4	0.7	0.7	-0.9	NA	NA	28	.63	.14	.11	.11	.07
	45	48	34	45	39			45	53				
071.	1.8	1.0	0.6	0.7	0.7	NA	NA	23	.83	.13	.11	.09	.07
	42	40	26	43	55			44	68				
072.	4.0	2.2	1.2	1.5	0.7	NA	NA	104	.74	.08	.06	.08	.06
	63	62	55	63	55			70	61				
073.	2.8	1.8	0.8	1.0	0.1	NA	NA	29	.60	.11	.09	.09	.07
	52	54	37	51	49			46	52				
074.	4.7	2.5	1.1	1.8	0.9	NA	NA	54	.56	.07	.07	.08	.05
	70	68	53	70	57			54	49				
075.	2.9	1.8	1.0	0.9	-1.4	NA	NA	27	.58	.12	.09	.10	.07
	52	54	48	50	34			45	51				
076.	3.7	2.1	0.9	1.3	-0.6	NA	NA	55	.73	.08	.07	.10	.08
	61	61	41	60	42			54	61				
077.	3.4	2.0	1.3	1.3	0.8	NA	NA	96	.63	.10	.06	.10	.07
	57	58	61	58	56			67	54				
078.	2.5	1.5	1.2	0.9	NA	NA	NA	31	.50	.10	.09	.12	.07
	49	49	56	50				46	45				
079.	2.3	1.4	0.9	0.8	0.3	NA	NA	36	.70	.13	.10	.08	.07
	47	48	42	46	51			48	59				
080.	2.9	1.7	1.0	1.1	-0.6	NA	NA	37	.59	.10	.08	.10	.07
	53	53	45	54	42			48	51				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 6.1 Program Measures (Raw and Standardized Values) in History

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
081.	Saint Louis University	16	23	14	.11	11.0	.53	.06
	History	*41*	*45*	*42*	*39*	*37*	*47*	*39*
082.	South Carolina, University of-Columbia	29	23	28	.32	9.3	.76	.20
	History	*51*	*45*	*45*	*54*	*49*	*68*	*55*
083.	Southern California, University of	21	24	37	.27	8.3	.50	.18
	History	*45*	*46*	*47*	*50*	*57*	*45*	*53*
084.	Stanford University	30	56	91	.53	8.1	.58	.33
	History	*52*	*56*	*58*	*68*	*58*	*52*	*70*
085.	Syracuse University	24	28	26	.35	9.3	.46	.12
	History	*47*	*47*	*45*	*55*	*50*	*41*	*45*
086.	Temple University	39	24	99	.00	11.3	.72	.17
	History	*59*	*46*	*60*	*32*	*36*	*65*	*51*
087.	Tennessee, University of-Knoxville	22	19	20	.10	10.5	.79	.11
	History	*46*	*44*	*44*	*39*	*41*	*70*	*44*
088.	Texas Christian University	13	16	15	.22	7.0	.45	.05
	History	*38*	*43*	*43*	*47*	*65*	*40*	*38*
089.	Texas Tech University-Lubbock	22	19	23	.04	10.1	.61	.26
	History	*46*	*44*	*44*	*35*	*44*	*54*	*62*
090.	Texas, University of-Austin	51	55	57	.44	8.9	.61	.20
	History	*69*	*55*	*51*	*62*	*52*	*55*	*55*
091.	Toledo, University of	20	10	15	.10	8.5	.70	.20
	History	*44*	*41*	*43*	*39*	*55*	*62*	*55*
092.	Tulane University	18	32	74	.55	9.7	.49	.06
	History	*42*	*48*	*55*	*69*	*47*	*43*	*39*
093.	Utah, University of-Salt Lake City	34	18	56	.31	8.1	.46	.08
	History	*55*	*44*	*51*	*53*	*58*	*41*	*41*
094.	Vanderbilt University	23	17	32	.29	10.5	.65	.17
	History	*46*	*44*	*46*	*52*	*41*	*58*	*52*
095.	Virginia, University of	44	81	77	.35	8.5	.51	.12
	History	*63*	*63*	*55*	*56*	*55*	*45*	*45*
096.	Washington State University-Pullman	17	17	17	.15	8.9	.69	.23
	History	*42*	*44*	*43*	*43*	*52*	*62*	*58*
097.	Washington University-Saint Louis	23	22	19	.45	8.5	.63	.20
	History	*46*	*45*	*43*	*62*	*55*	*56*	*55*
098.	Washington, University of-Seattle	35	57	29	.34	7.6	.45	.19
	History	*56*	*56*	*45*	*55*	*61*	*40*	*53*
099.	Wayne State University	24	10	10	NA	NA	NA	NA
	History	*47*	*41*	*41*				
100.	West Virginia University	18	25	23	.04	9.7	.63	.07
	History	*42*	*46*	*44*	*35*	*47*	*56*	*40*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 6.1 Program Measures (Raw and Standardized Values) in History

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
081.	1.2	0.8	0.8	0.4	NA	NA	NA	10	.31	.17	.12	.12	.06
	37	*36*	*38*	*36*				*39*	*32*				
082.	2.4	1.4	1.4	0.5	-0.4	NA	NA	28	.62	.14	.10	.12	.07
	48	*47*	*67*	*40*	*45*			*45*	*53*				
083.	2.0	1.2	0.9	0.6	0.4	NA	NA	30	.67	.11	.10	.09	.06
	44	*44*	*44*	*43*	*52*			*46*	*56*				
084.	4.4	2.5	0.9	1.6	2.0	NA	NA	81	.80	.07	.06	.08	.06
	67	*68*	*43*	*67*	*68*			*63*	*66*				
085.	2.4	1.4	1.2	0.7	-0.3	NA	NA	36	.67	.12	.10	.07	.07
	48	*48*	*56*	*45*	*45*			*48*	*56*				
086.	2.6	1.5	1.2	0.9	-0.4	NA	NA	52	.49	.11	.09	.12	.07
	50	*49*	*58*	*49*	*44*			*53*	*44*				
087.	1.9	1.2	1.0	0.6	-0.4	NA	NA	17	.36	.13	.13	.11	.07
	43	*43*	*48*	*41*	*44*			*42*	*35*				
088.	1.0	0.7	1.0	0.5	NA	NA	NA	9	.39	.13	.11	.10	.07
	34	*33*	*46*	*39*				*39*	*37*				
089.	0.8	0.7	0.8	0.3	NA	NA	NA	29	.55	.13	.12	.09	.06
	33	*34*	*38*	*36*				*46*	*48*				
090.	3.5	2.0	1.3	1.4	1.6	NA	NA	82	.57	.10	.08	.10	.07
	59	*59*	*61*	*60*	*64*			*63*	*50*				
091.	1.7	1.0	1.1	0.7	NA	NA	NA	22	.70	.17	.12	.12	.08
	42	*40*	*51*	*44*				*43*	*59*				
092.	2.4	1.4	1.1	0.8	-1.0	NA	NA	31	.61	.13	.10	.14	.07
	48	*47*	*51*	*46*	*38*			*46*	*52*				
093.	1.7	1.2	1.2	0.4	-0.6	NA	NA	35	.41	.14	.12	.12	.07
	42	*43*	*57*	*38*	*42*			*48*	*39*				
094.	3.1	1.8	1.3	1.0	-0.7	NA	NA	38	.61	.10	.08	.10	.06
	55	*55*	*61*	*52*	*41*			*49*	*52*				
095.	3.7	2.2	1.3	1.5	0.7	NA	NA	75	.57	.09	.07	.08	.07
	60	*62*	*64*	*64*	*56*			*61*	*49*				
096.	1.1	0.9	0.9	0.4	-0.3	NA	NA	7	.35	.12	.16	.12	.07
	35	*37*	*41*	*38*	*46*			*38*	*34*				
097.	2.8	1.7	1.0	0.9	-0.4	NA	NA	26	.44	.10	.10	.11	.07
	52	*53*	*46*	*50*	*45*			*45*	*40*				
098.	3.4	2.0	1.1	1.3	1.5	NA	NA	35	.57	.08	.05	.08	.07
	58	*59*	*53*	*59*	*63*			*48*	*50*				
099.	1.8	1.0	0.8	0.6	-0.4	NA	NA	29	.38	.15	.12	.11	.07
	42	*39*	*37*	*41*	*45*			*46*	*36*				
100.	1.3	0.8	0.8	0.3	NA	NA	NA	10	.33	.12	.10	.14	.06
	37	*35*	*38*	*35*				*39*	*33*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 6.1 Program Measures (Raw and Standardized Values) in History

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
101.	Wisconsin, University of-Madison	53	137	247	.44	9.0	.56	.22
	History	*70*	*80*	*91*	*62*	*51*	*50*	*57*
102.	Yale University	51	109	93	.55	7.4	.60	.38
	History	*69*	*72*	*59*	*69*	*63*	*54*	*75*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 6.1 Program Measures (Raw and Standardized Values) in History

Prog No.	Survey Results (08)	Survey Results (09)	Survey Results (10)	Survey Results (11)	University Library (12)	Research Support (13)	Research Support (14)	Published Articles (17)	Published Articles (18)	Survey Ratings Standard Error (08)	Survey Ratings Standard Error (09)	Survey Ratings Standard Error (10)	Survey Ratings Standard Error (11)
101.	4.2	2.3	0.7	1.7	1.6	NA	NA	127	.62	.09	.09	.09	.06
	65	*64*	*32*	*69*	*64*			*78*	*53*				
102.	4.8	2.7	1.0	1.8	2.1	NA	NA	70	.63	.05	.06	.08	.05
	71	*71*	*49*	*71*	*69*			*59*	*54*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 6.2 Summary Statistics Describing Each Program Measure--History

Measure	Number of Programs Evaluated	Mean	Standard Deviation	DECILES 1	2	3	4	5	6	7	8	9
Program Size												
01 Raw Value	102	28	13	14	17	19	22	24	27	31	36	48
Std Value	102	50	10	39	42	43	46	47	49	53	57	66
02 Raw Value	102	38	33	10	16	20	23	25	30	34	55	81
Std Value	102	50	10	41	43	44	45	46	48	49	55	63
03 Raw Value	102	51	48	12	19	26	29	35	42	55	70	100
Std Value	102	50	10	42	43	45	45	47	48	51	54	60
Program Graduates												
04 Raw Value	98	.26	.15	.06	.10	.17	.20	.27	.30	.35	.40	.46
Std Value	98	50	10	37	39	44	46	51	53	56	59	63
05 Raw Value	98	9.2	1.4	11.3	10.2	9.7	9.4	9.0	8.8	8.4	8.1	7.5
Std Value	98	50	10	35	43	47	49	51	53	56	58	62
06 Raw Value	98	.56	.11	.41	.46	.50	.53	.57	.60	.61	.64	.70
Std Value	98	50	10	36	41	45	47	51	54	55	57	63
07 Raw Value	98	.16	.09	.05	.08	.10	.13	.15	.17	.20	.22	.27
Std Value	98	50	10	38	41	43	47	49	51	54	57	62
Survey Results												
08 Raw Value	102	2.6	1.0	1.2	1.7	1.9	2.3	2.5	2.8	3.1	3.7	4.0
Std Value	102	50	10	36	41	43	47	49	52	55	60	63
09 Raw Value	102	1.6	.5	.8	1.0	1.2	1.4	1.5	1.7	1.8	2.1	2.2
Std Value	102	50	10	36	39	43	47	49	53	55	61	63
10 Raw Value	101	1.1	.2	.8	.9	.9	1.0	1.1	1.1	1.2	1.2	1.3
Std Value	101	50	10	38	43	43	48	52	52	57	57	62
11 Raw Value	102	.9	.4	.4	.5	.7	.7	.9	.9	1.2	1.3	1.6
Std Value	102	50	10	37	40	44	44	49	49	57	59	66
University Library												
12 Raw Value	75	.2	1.0	-1.0	-.6	-.4	-.4	-.1	.3	.7	.9	1.7
Std Value	75	50	10	39	42	44	44	47	51	55	57	65
Publication Records												
17 Raw Value	102	43	31	10	16	23	28	34	38	53	67	82
Std Value	102	50	10	39	41	44	45	47	49	53	58	63
18 Raw Value	101	.58	.14	.38	.46	.50	.56	.58	.61	.63	.70	.77
Std Value	101	50	10	36	41	44	49	50	52	54	59	64

NOTE: Standardized values reported in the preceding table have been computed from exact values of the mean and standard deviation and not the rounded values reported here.

TABLE 6.3 Intercorrelations Among Program Measures on 102 Programs in History

	Measure															
Program Size	01	02	03	04	05	06	07	08	09	10	11	12	13	14	17	18
01		.77	.75	.32	.02	.03	.32	.69	.66	.31	.68	.67	N/A	N/A	.86	.31
02			.83	.34	.07	.09	.43	.74	.72	.02	.77	.73	N/A	N/A	.82	.35
03				.34	.03	.02	.34	.66	.62	.04	.67	.57	N/A	N/A	.75	.26
Program Graduates																
04					.36	-.08	.40	.63	.63	.11	.57	.38	N/A	N/A	.39	.34
05						-.13	.33	.19	.22	.08	.23	.08	N/A	N/A	.08	.08
06							.38	.05	.04	-.09	.06	.07	N/A	N/A	.08	.14
07								.54	.52	-.07	.55	.44	N/A	N/A	.39	.31
Survey Results																
08									.98	.24	.97	.71	N/A	N/A	.79	.53
09										.23	.96	.69	N/A	N/A	.77	.53
10											.17	.06	N/A	N/A	.21	.03
11												.73	N/A	N/A	.79	.51
University Library																
12													N/A	N/A	.66	.37
Research Support																
13														N/A	N/A	N/A
14															N/A	N/A
Publication Records																
17																.60
18																

NOTE: Since in computing correlation coefficients program data must be available for both of the measures being correlated, the actual number of programs on which each coefficient is based varies.

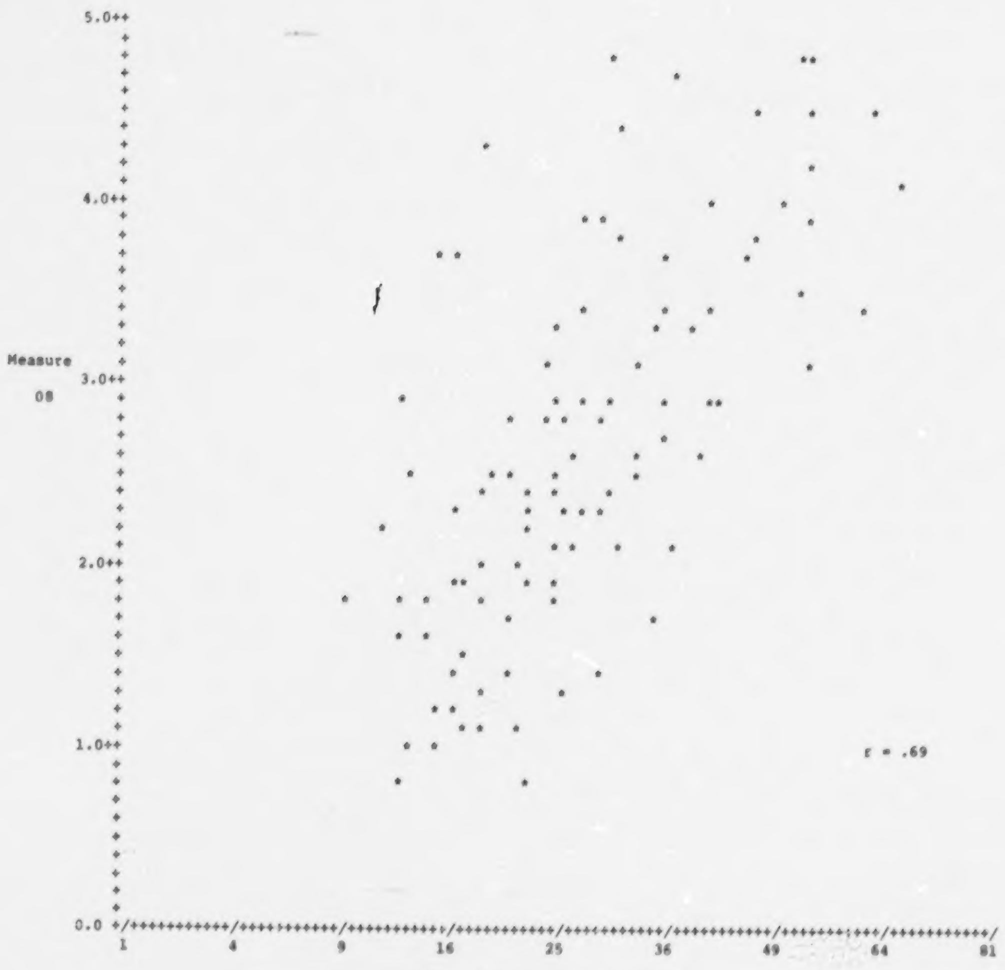


FIGURE 6.1 Mean rating of scholarly quality of faculty (measure 08) versus number of faculty members (measure 01)--102 programs in history.

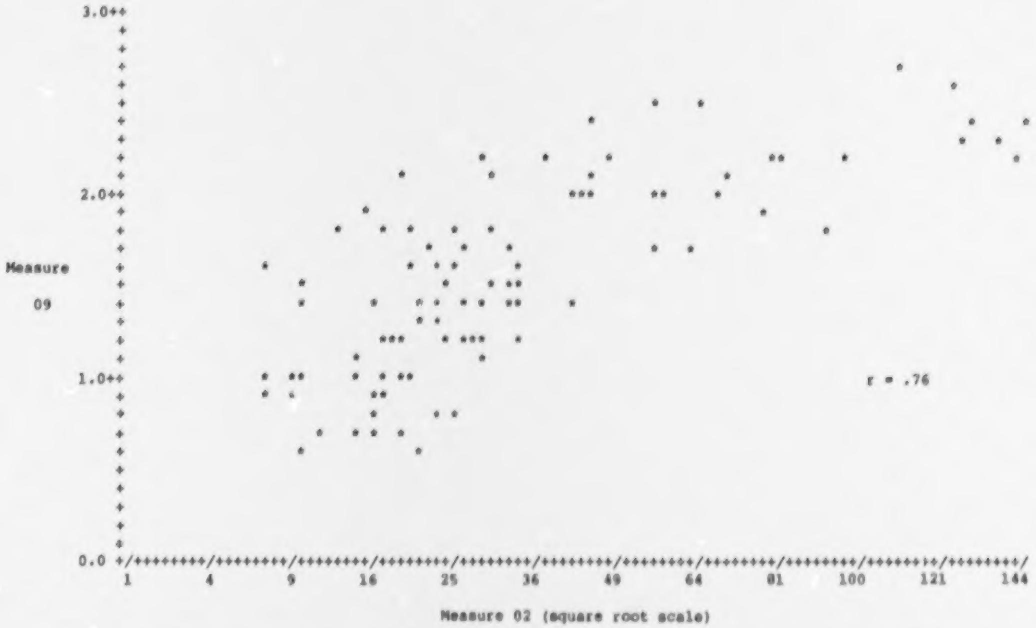


FIGURE 6.2 Mean rating of program effectiveness in educating research scholars/scientists (measure 09) versus number of graduates in last five years (measure 02)--102 programs in history.

TABLE 6.4 Characteristics of Survey Participants in History

	Respondents	
	N	%
Field of Specialization		
American History	78	47
European History	46	28
Other/Unknown	42	25
Faculty Rank		
Professor	92	55
Associate Professor	61	37
Assistant Professor	13	8
Year of Highest Degree		
Pre-1950	8	5
1950-59	43	26
1960-69	63	38
Post-1969	48	29
Unknown	4	2
Evaluator Selection		
Nominated by Institution	151	91
Other	15	9
Survey Form		
With Faculty Names	148	89
Without Names	18	11
Total Evaluators	166	100

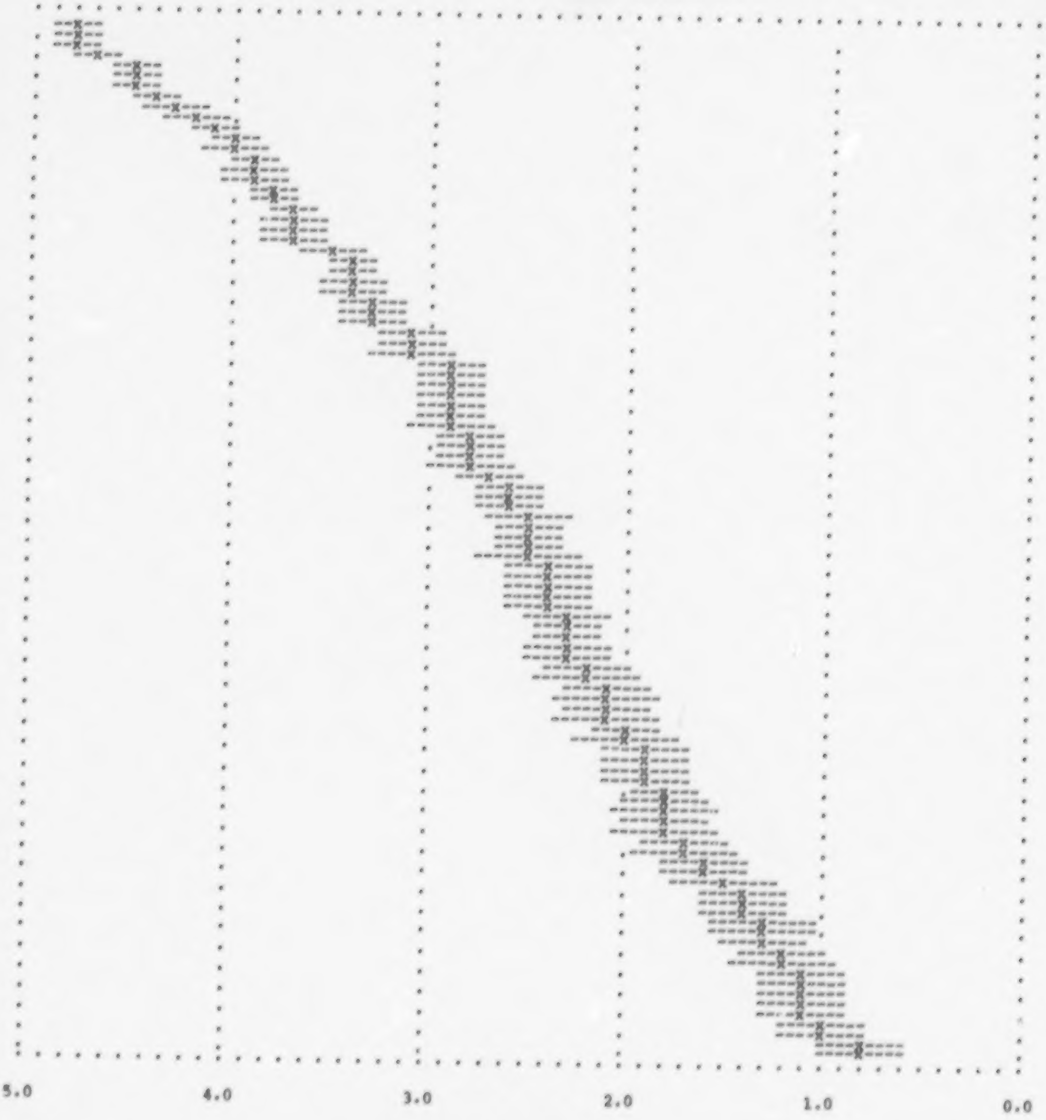


FIGURE 6.3 Mean rating of scholarly quality of faculty in 102 programs in history.

NOTE: Programs are listed in sequence of mean rating, with the highest-rated program appearing at the top of the page. The broken lines (---) indicate a confidence interval of ±1.5 standard errors around the reported mean (x) of each program.

VII

Political Science Programs

In this chapter 83 research-doctorate programs in political science are assessed. These programs, according to the information supplied by their universities, have accounted for 2,909 doctoral degrees awarded during the FY1976-80 period--approximately 86 percent of the aggregate number of political science and international relations doctorates earned from U.S. universities in this five-year span.[1] On the average, 50 full-time and part-time students intending to earn doctorates were enrolled in a program in December 1980, with an average faculty size of 23 members.[2] Five programs were initiated since 1970, and no two programs are located in the same university. In addition to the 83 institutions represented in this discipline, another 4 were initially identified as meeting the criteria[3] for inclusion in the assessment:

American University
University of Denver
University of Miami--Florida
Tufts University

Political science programs at these four institutions have not been included in the evaluations in this discipline, since in each case the study coordinator either indicated that the institution did not at that time have a research-doctorate program in political science or failed to provide the information requested by the committee.

Before examining individual program results presented in Table 7.1, the reader is urged to refer to Chapter II, in which each of the 16 measures used in the assessment is discussed. Summary statistics describing every measure are given in Table 7.2. For 14 of the measures, data are reported for at least 77 of the 83 political science programs. For measure 12, a composite index of the size of a university library, data are available for 71 programs; for measure 14, total university expenditures for research in this discipline, data are available for 58 programs. The programs not evaluated on measures 12 and 14 are typically smaller--in terms of faculty size and graduate student enrollment--than other political science programs. Were data on these two measures available for all 83 programs, it is likely that their reported means would be appreciably lower (and that some of the correlations of these measures with others would be higher).

---

[1] Data from the NRC's Survey of Earned Doctorates indicate that 2,911 research doctorates in political science and 470 in international relations were awarded by U.S. universities between FY1976 and FY1980.

[2] See the reported means for measures 03 and 01 in Table 7.2.

[3] As mentioned in Chapter I, the primary criterion for inclusion was that a university had awarded at least 10 doctorates in political science during the FY1976-78 period.

Intercorrelations among the 16 measures (Pearson product-moment coefficients) are given in Table 7.3. Of particular note are the high positive correlations of the measures of the number of program faculty (01) and the number of recent graduates (02) with the total published articles by program faculty (17) and the reputational survey ratings (08 and 09). Also of interest are the high positive correlations of university library size (12) with survey results (08 and 09). Figure 7.1 illustrates the relation between the mean rating of the scholarly quality of faculty (measure 08) and the number of faculty members (measure 01) for each of 83 programs in political science. Figure 7.2 plots the mean rating of program effectiveness (measure 09) against the total number of FY1976-80 program graduates (measure 02). Although in both figures there is a significant positive correlation between program size and reputational rating, it is quite apparent that some of the smaller programs received high mean ratings and that some of the larger programs received low mean ratings.

Table 7.4 describes the 152 faculty members who participated in the evaluation of political science programs. These individuals constituted 61 percent of those asked to respond to the survey in this discipline and 8 percent of the faculty population in the 83 research-doctorate programs being evaluated.[4] A majority of the survey participants had earned their highest degree since 1970, and a majority held the rank of full professor.

To assist the reader in interpreting results of the survey evaluations, estimated standard errors have been computed for mean ratings of the scholarly quality of faculty in 83 political science programs (and are given in Table 7.1). For each program the mean rating and an associated "confidence interval" of 1.5 standard errors are illustrated in Figure 7.3 (listed in order of highest to lowest mean rating). In comparing two programs, if their confidence intervals do not overlap, one may conclude that there is a significant difference in their mean ratings at a .05 level of significance.[5] From this figure it is also apparent that one should have somewhat more confidence in the accuracy of the mean ratings of higher-rated programs than lower-rated programs. This generalization results primarily from the fact that evaluators are not as likely to be familiar with the less prestigious programs, and consequently the mean ratings of these programs are usually based on fewer survey responses.

---

[4] See Table 2.3 in Chapter II.

[5] See pp. 30-32 for a discussion of the interpretation of mean ratings and associated confidence intervals.

TABLE 7.1 Program Measures (Raw and Standardized Values) in Political Science

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
001.	Arizona, University of-Tucson	26	16	18	.39	8.5	.72	.11
	*Political Science**	*54*	*43*	*42*	*57*	*49*	*53*	*40*
002.	Atlanta University	8	16	36	NA	NA	NA	NA
	*Political Science**	*33*	*43*	*47*				
003.	Boston University	19	17	34	.08	7.1	.25	.08
	Political Science	*46*	*43*	*46*	*36*	*59*	*17*	*38*
004.	Brandeis University	13	18	17	.43	7.6	.76	.38
	Politics	*39*	*44*	*42*	*60*	*55*	*56*	*59*
005.	CUNY-Graduate School	35	38	90	.09	9.3	.56	.08
	Political Science	*64*	*51*	*59*	*37*	*43*	*40*	*38*
006.	California, University of-Berkeley	46	83	116	.51	9.1	.74	.36
	Political Science	*77*	*67*	*65*	*66*	*44*	*54*	*57*
007.	California, University of-Davis	21	7	28	.40	8.1	.60	.10
	Political Science	*48*	*40*	*45*	*58*	*52*	*44*	*39*
008.	California, University of-Los Angeles	46	43	48	.35	10.0	.71	.33
	Political Science	*77*	*53*	*49*	*55*	*38*	*53*	*55*
009.	California, University of-Riverside	13	31	40	.12	6.8	.48	.11
	Political Science	*39*	*48*	*48*	*39*	*61*	*35*	*40*
010.	California, University of-San Diego	17	NA	2	NA	NA	NA	NA
	*Political Science**	*44*		*39*				
011.	California, University of-Santa Barbara	24	52	40	.24	7.4	.73	.22
	Political Science	*52*	*56*	*48*	*47*	*56*	*54*	*47*
012.	Catholic University of America	15	13	64	NA	NA	NA	NA
	Politics	*41*	*42*	*53*				
013.	Chicago, University of	27	110	103	.47	8.9	.72	.32
	Political Science	*55*	*77*	*62*	*63*	*46*	*53*	*54*
014.	Cincinnati, University of	15	20	30	.15	7.8	.74	.21
	Political Science	*41*	*44*	*45*	*41*	*54*	*54*	*47*
015.	Claremont Graduate School	25	148	169	.14	8.0	.49	.08
	Government	*53*	*91*	*78*	*41*	*52*	*35*	*38*
016.	Colorado, University of	24	22	48	.17	9.3	.72	.24
	Political Science	*52*	*45*	*49*	*43*	*43*	*53*	*49*
017.	Columbia University	35	129	302	.40	9.5	.68	.22
	Political Science	*64*	*84*	*99*	*58*	*41*	*50*	*47*
018.	Connecticut, University of-Storrs	20	25	19	.44	9.1	.78	.17
	Political Science	*47*	*46*	*43*	*61*	*44*	*58*	*44*
019.	Cornell University-Ithaca	28	40	48	.32	7.8	.82	.41
	Government	*56*	*52*	*49*	*53*	*54*	*61*	*61*
020.	Duke University	23	31	40	.41	7.6	.59	.11
	Political Science	*50*	*48*	*48*	*59*	*56*	*43*	*40*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 7.1 Program Measures (Raw and Standardized Values) in Political Science

Prog No.	Survey Results (08)	(09)	(10)	(11)	University Library (12)	Research Support (13)	(14)	Published Articles (17)	(18)	Survey Ratings Standard Error (08)	(09)	(10)	(11)
001.	2.5	1.4	1.7	0.9	0.9	.00	171	65	.73	.10	.10	.07	.07
	50	*48*	*78*	*48*	*57*	*41*	*46*	*58*	*57*				
002.	0.4	0.3	0.9	0.2	NA	NA	NA	3	NA	.08	.08	.12	.04
	27	*28*	*41*	*31*				*35*					
003.	2.2	1.2	0.7	0.9	-0.4	.00	31	54	.74	.11	.10	.10	.06
	46	*44*	*35*	*47*	*44*	*41*	*44*	*54*	*58*				
004.	2.6	1.4	0.8	1.0	NA	.00	30	18	.77	.10	.09	.07	.06
	50	*48*	*38*	*50*		*41*	*44*	*41*	*60*				
005.	3.1	1.5	0.9	1.1	NA	.00	256	33	.46	.11	.10	.08	.07
	55	*50*	*41*	*52*		*41*	*47*	*46*	*38*				
006.	4.7	2.4	1.0	1.8	2.2	.11	3541	96	.61	.06	.06	.07	.04
	71	*67*	*49*	*70*	*70*	*56*	*86*	*70*	*49*				
007.	2.3	1.3	1.3	0.7	0.6	.05	423	54	.81	.10	.10	.11	.06
	47	*46*	*60*	*44*	*54*	*48*	*49*	*54*	*63*				
008.	3.5	2.0	1.1	1.3	2.0	.00	1243	92	.59	.08	.07	.07	.07
	59	*59*	*50*	*59*	*68*	*41*	*59*	*68*	*47*				
009.	2.0	1.0	0.8	0.8	-1.0	.00	NA	22	.54	.12	.11	.08	.07
	44	*41*	*38*	*46*	*38*	*41*		*42*	*44*				
010.	2.9	1.6	1.9	1.2	-0.0	.24	NA	20	.47	.09	.10	.05	.07
	53	*53*	*86*	*56*	*47*	*74*		*41*	*39*				
011.	2.7	1.4	1.1	1.1	-0.1	.13	429	49	.71	.09	.08	.07	.06
	51	*50*	*50*	*53*	*47*	*59*	*49*	*52*	*56*				
012.	1.4	0.8	1.2	0.5	NA	.07	NA	23	.53	.11	.10	.10	.06
	38	*37*	*55*	*38*		*50*		*42*	*44*				
013.	4.5	2.4	1.0	1.8	0.9	.15	244	85	.93	.08	.08	.09	.05
	70	*68*	*47*	*69*	*56*	*62*	*47*	*66*	*70*				
014.	1.5	0.8	1.0	0.6	-0.2	.07	NA	19	.47	.11	.10	.10	.06
	39	*38*	*49*	*40*	*45*	*50*		*41*	*39*				
015.	2.2	1.3	0.8	0.8	NA	.04	NA	21	.40	.13	.10	.09	.07
	46	*47*	*39*	*44*		*47*		*42*	*35*				
016.	2.1	1.2	1.1	0.6	-0.9	.13	68	34	.58	.10	.11	.08	.06
	45	*45*	*52*	*39*	*39*	*59*	*45*	*47*	*47*				
017.	3.6	1.8	0.9	1.4	1.7	.00	466	56	.69	.10	.07	.08	.07
	60	*56*	*44*	*60*	*65*	*41*	*49*	*55*	*54*				
018.	2.3	1.2	1.0	0.9	-0.5	.05	54	27	.55	.11	.10	.07	.06
	47	*45*	*49*	*47*	*43*	*48*	*45*	*44*	*45*				
019.	3.7	2.1	1.3	1.5	1.6	.04	625	78	.82	.09	.07	.08	.06
	62	*62*	*59*	*63*	*64*	*46*	*51*	*63*	*63*				
020.	3.4	1.8	1.4	1.4	0.3	.04	341	54	.78	.08	.06	.07	.06
	58	*57*	*64*	*60*	*51*	*47*	*48*	*54*	*61*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 7.1 Program Measures (Raw and Standardized Values) in Political Science

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
021.	Emory University	14	13	20	NA	NA	NA	NA
	Political Science	*40*	*42*	*43*				
022.	Florida State University-Tallahassee	19	41	61	.17	5.2	.78	.47
	Government	*46*	*52*	*52*	*43*	*73*	*58*	*65*
023.	Florida, University of-Gainesville	23	21	72	.33	7.6	.81	.29
	Political Science	*50*	*45*	*55*	*54*	*55*	*60*	*52*
024.	George Washington University	22	25	60	.27	11.5	.63	.17
	Political Science	*49*	*46*	*52*	*49*	*27*	*46*	*44*
025.	Georgetown University	13	22	62	.27	10.5	.79	.11
	Political Science	*39*	*45*	*53*	*50*	*34*	*58*	*40*
026.	Georgia, University of-Athens	16	28	31	.14	8.0	.87	.50
	Political Science	*42*	*47*	*45*	*41*	*52*	*64*	*67*
027.	Harvard University	23	109	158	.43	7.3	.81	.41
	Government	*50*	*77*	*75*	*60*	*58*	*60*	*61*
028.	Hawaii, University of	28	45	68	.26	9.6	.41	.09
	Political Science	*56*	*53*	*54*	*48*	*41*	*29*	*39*
029.	Howard University	20	31	50	.20	6.3	.46	.17
	Political Science	*47*	*48*	*50*	*45*	*65*	*33*	*44*
030.	Idaho, University of-Moscow	7	10	11	NA	NA	NA	NA
	Political Science & Public Affairs Research	*32*	*41*	*41*				
031.	Illinois, University-Urbana/Champaign	29	48	45	.26	7.8	.76	.40
	Political Science	*57*	*55*	*49*	*48*	*54*	*56*	*59*
032.	Indiana University-Bloomington	35	65	84	.39	9.0	.88	.46
	Political Science	*64*	*61*	*58*	*58*	*45*	*66*	*64*
033.	Iowa, University of-Iowa City	19	21	27	.21	5.8	.83	.54
	Political Science	*46*	*45*	*45*	*45*	*68*	*62*	*69*
034.	Johns Hopkins University	10	34	40	.46	7.9	.70	.22
	Political Science	*36*	*49*	*48*	*62*	*53*	*52*	*47*
035.	Kansas, University of	28	17	51	.29	10.6	.82	.18
	Political Science	*56*	*43*	*50*	*51*	*33*	*61*	*45*
036.	Kent State University	21	17	23	.20	6.4	.87	.13
	Political Science	*48*	*43*	*44*	*45*	*64*	*64*	*42*
037.	Kentucky, University of	16	16	34	.25	8.0	.77	.35
	Political Science	*42*	*43*	*46*	*48*	*52*	*57*	*57*
038.	Maryland, University of-College Park	34	34	87	.13	9.3	.58	.18
	Government and Politics	*63*	*49*	*59*	*40*	*43*	*42*	*44*
039.	Massachusetts Institute of Technology	29	70	106	.53	7.6	.81	.46
	Political Science	*57*	*63*	*63*	*67*	*56*	*60*	*64*
040.	Massachusetts, University of-Amherst	26	29	75	.16	10.1	.76	.17
	Political Science	*54*	*48*	*56*	*42*	*37*	*56*	*44*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 7.1 Program Measures (Raw and Standardized Values) in Political Science

Prog	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
No.	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
021.	1.4	0.9	1.2	0.5	-0.6	.00	NA	12	.43	.12	.10	.14	.06
	38	*39*	*58*	*37*	*42*	*41*		*38*	*37*				
022.	2.4	1.5	1.4	1.0	-0.4	.11	161	47	.63	.12	.10	.09	.08
	49	*50*	*64*	*49*	*43*	*56*	*46*	*51*	*50*				
023.	2.2	1.2	1.0	0.6	0.8	.09	NA	21	.52	.12	.10	.08	.06
	46	*44*	*48*	*41*	*55*	*53*		*42*	*43*				
024.	1.9	1.1	1.2	0.7	NA	.05	NA	40	.68	.12	.10	.09	.06
	43	*43*	*55*	*43*		*47*		*49*	*54*				
025.	2.0	1.1	0.9	0.9	-0.6	.00	NA	34	.77	.11	.10	.07	.06
	44	*44*	*44*	*47*	*41*	*41*		*47*	*60*				
026.	2.4	1.4	1.4	0.9	0.4	.00	350	64	.94	.11	.10	.09	.07
	48	*49*	*63*	*49*	*52*	*41*	*48*	*58*	*71*				
027.	4.7	2.4	1.1	1.8	3.0	.09	618	68	.87	.06	.08	.07	.04
	71	*67*	*50*	*71*	*78*	*53*	*51*	*59*	*67*				
028.	3.1	1.6	1.1	1.2	-0.1	.04	4	40	.64	.10	.09	.08	.07
	55	*53*	*54*	*56*	*46*	*46*	*44*	*49*	*51*				
029.	1.2	0.7	1.0	0.3	-0.4	.00	NA	9	.25	.13	.12	.13	.05
	36	*35*	*47*	*32*	*44*	*41*		*37*	*24*				
030.	0.4	0.3	1.1	0.3	NA	NA	104	7	NA	.10	.09	.10	.05
	28	*29*	*50*	*32*			*45*	*36*					
031.	3.2	1.9	1.4	1.3	2.0	.00	224	84	.66	.09	.07	.09	.06
	57	*59*	*67*	*58*	*67*	*41*	*47*	*65*	*52*				
032.	3.4	2.0	1.2	1.3	0.9	.14	656	78	.80	.08	.06	.09	.06
	59	*60*	*57*	*59*	*57*	*61*	*52*	*63*	*62*				
033.	3.1	1.9	1.0	1.2	0.3	.11	100	26	.68	.10	.07	.09	.07
	55	*58*	*48*	*54*	*51*	*56*	*45*	*44*	*54*				
034.	3.2	1.8	0.9	1.3	-0.4	.30	511	21	.60	.10	.08	.08	.06
	56	*56*	*44*	*58*	*44*	*83*	*50*	*42*	*48*				
035.	2.0	1.1	1.1	0.5	0.1	.00	41	27	.50	.10	.09	.09	.06
	44	*43*	*52*	*39*	*49*	*41*	*44*	*44*	*41*				
036.	1.3	0.8	1.1	0.4	-1.8	.00	NA	20	.43	.12	.11	.10	.06
	37	*39*	*50*	*35*	*30*	*41*		*41*	*37*				
037.	2.6	1.6	1.1	1.0	-0.1	.19	NA	50	.81	.10	.09	.07	.06
	50	*53*	*53*	*51*	*47*	*67*		*53*	*63*				
038.	2.7	1.6	1.2	1.2	0.2	.00	71	70	.65	.08	.08	.10	.07
	51	*52*	*57*	*54*	*49*	*41*	*45*	*60*	*51*				
039.	4.3	2.4	1.0	1.6	-0.3	.10	1251	49	.55	.08	.08	.07	.06
	67	*67*	*48*	*65*	*44*	*55*	*59*	*52*	*45*				
040.	2.8	1.6	1.2	1.1	-0.7	.04	75	55	.65	.09	.09	.07	.06
	53	*52*	*54*	*52*	*41*	*46*	*45*	*54*	*52*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 7.1 Program Measures (Raw and Standardized Values) in Political Science

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
041.	Miami University-Ohio	16	22	15	.10	7.3	.70	.05
	Political Science	*42*	*45*	*42*	*38*	*58*	*52*	*36*
042.	Michigan State University-East Lansing	23	17	34	.16	8.0	.80	.40
	Political Science	*50*	*43*	*46*	*42*	*52*	*59*	*60*
043.	Michigan, University of-Ann Arbor	50	100	107	.43	8.7	.77	.45
	Political Science	*81*	*73*	*63*	*60*	*47*	*57*	*63*
044.	Minnesota, University of	28	48	28	.28	7.4	.68	.41
	Political Science	*56*	*55*	*45*	*50*	*57*	*50*	*60*
045.	Missouri, University of-Columbia	19	31	38	.25	9.5	.78	.11
	Political Science	*46*	*48*	*47*	*48*	*41*	*58*	*40*
046.	Nebraska, University of-Lincoln	21	13	25	.08	8.5	.70	.50
	Political Science	*48*	*42*	*44*	*37*	*49*	*52*	*67*
047.	New School for Social Research	6	38	56	.12	11.0	.56	.09
	Political Science	*31*	*51*	*51*	*39*	*30*	*41*	*39*
048.	New York University	23	58	30	.19	10.7	.58	.08
	Politics	*50*	*58*	*45*	*44*	*33*	*42*	*38*
049.	North Carolina, University of-Chapel Hill	33	66	64	.42	8.3	.72	.32
	Political Science	*62*	*61*	*53*	*59*	*51*	*53*	*54*
050.	Northern Illinois University-De Kalb	12	24	47	.15	8.3	.74	.21
	Political Science	*38*	*46*	*49*	*41*	*50*	*54*	*47*
051.	Northwestern University	28	33	35	.37	6.5	.68	.42
	Political Science	*56*	*49*	*46*	*56*	*63*	*50*	*61*
052.	Notre Dame, University of	14	24	44	.12	10.0	.56	.00
	Government and International Studies	*40*	*46*	*49*	*39*	*38*	*41*	*33*
053.	Ohio State University-Columbus	26	76	79	.04	5.9	.73	.44
	Political Science	*54*	*65*	*57*	*34*	*68*	*54*	*62*
054.	Oklahoma, University of-Norman	28	35	41	.11	8.0	.67	.39
	Political Science	*56*	*50*	*48*	*39*	*52*	*49*	*59*
055.	Oregon, University of-Eugene	18	21	21	.41	9.3	.59	.22
	Political Science	*45*	*45*	*43*	*59*	*43*	*43*	*48*
056.	Pennsylvania State University	19	13	19	.30	8.5	.64	.00
	Political Science	*46*	*42*	*43*	*51*	*49*	*47*	*33*
057.	Pennsylvania, University of	20	20	17	.42	10.8	.48	.28
	*Political Science**	*47*	*44*	*42*	*60*	*32*	*35*	*52*
058.	Pittsburgh, University of	25	25	39	.34	9.7	.79	.18
	Political Science	*53*	*46*	*47*	*54*	*40*	*58*	*45*
059.	Princeton University	23	46	64	.40	8.2	.78	.22
	Political Science	*50*	*54*	*53*	*58*	*51*	*58*	*48*
060.	Purdue University-West Lafayette	22	17	24	.13	6.5	.53	.27
	Political Science	*49*	*43*	*44*	*40*	*63*	*39*	*51*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 7.1 Program Measures (Raw and Standardized Values) in Political Science

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
041.	1.7	0.9	0.9	0.6	-0.8	.00	NA	14	.31	.13	.11	.10	.06
	41	*40*	*43*	*41*	*40*	*41*		*39*	*29*				
042.	2.8	1.7	0.7	1.2	0.3	.09	251	53	.70	.09	.06	.07	.06
	52	*55*	*33*	*54*	*51*	*53*	*47*	*54*	*55*				
043.	4.6	2.5	1.0	1.8	1.8	.28	5154	151	.84	.06	.05	.07	.05
	70	*69*	*48*	*69*	*66*	*80*	*99*	*90*	*65*				
044.	3.8	2.3	1.3	1.6	1.2	.11	468	43	.61	.07	.06	.08	.06
	62	*66*	*61*	*64*	*59*	*56*	*49*	*50*	*49*				
045.	2.0	1.1	1.0	0.7	-0.2	.11	4	30	.74	.12	.10	.07	.07
	44	*43*	*45*	*42*	*46*	*56*	*44*	*45*	*58*				
046.	1.8	1.0	1.2	0.6	-0.5	.05	59	55	.62	.12	.10	.10	.06
	42	*41*	*56*	*40*	*43*	*48*	*45*	*54*	*50*				
047.	1.0	0.6	0.4	0.6	NA	NA	NA	2	NA	.15	.10	.09	.07
	34	*35*	*20*	*41*				*35*					
048.	2.6	1.4	0.9	0.9	0.5	.04	652	31	.48	.08	.08	.08	.06
	50	*49*	*44*	*48*	*52*	*47*	*52*	*45*	*40*				
049.	3.6	2.1	0.9	1.4	1.0	.12	22	49	.58	.07	.05	.07	.06
	60	*62*	*41*	*60*	*58*	*58*	*44*	*52*	*47*				
050.	1.3	0.8	1.0	0.5	NA	.08	538	22	.58	.11	.11	.11	.06
	37	*37*	*45*	*38*		*53*	*50*	*42*	*47*				
051.	3.6	2.1	1.0	1.3	0.3	.11	224	53	.68	.08	.07	.08	.07
	60	*62*	*47*	*59*	*51*	*56*	*47*	*54*	*54*				
052.	2.0	1.1	1.1	0.7	-1.3	.00	NA	31	.79	.12	.11	.08	.06
	44	*44*	*51*	*42*	*34*	*41*		*45*	*61*				
053.	3.3	1.9	1.4	1.3	0.9	.19	559	74	.85	.08	.07	.08	.07
	57	*59*	*67*	*59*	*56*	*68*	*50*	*62*	*65*				
054.	1.7	1.1	1.2	0.4	-0.6	.00	564	44	.50	.11	.10	.10	.06
	41	*44*	*55*	*36*	*42*	*41*	*51*	*50*	*41*				
055.	2.7	1.6	0.9	1.1	-0.9	.11	NA	14	.44	.10	.08	.08	.07
	51	*53*	*41*	*52*	*38*	*57*		*39*	*38*				
056.	2.3	1.4	0.8	0.8	0.7	.11	229	60	.79	.10	.11	.07	.05
	47	*48*	*39*	*45*	*55*	*56*	*47*	*56*	*61*				
057.	2.8	1.4	0.7	1.1	0.7	.05	1881	62	.50	.09	.09	.08	.06
	53	*49*	*33*	*53*	*54*	*48*	*66*	*57*	*41*				
058.	2.8	1.8	1.0	1.1	0.1	.00	168	60	.84	.10	.07	.09	.07
	52	*55*	*47*	*52*	*48*	*41*	*46*	*56*	*65*				
059.	3.9	2.1	0.9	1.6	0.9	.04	1747	54	.61	.09	.07	.08	.06
	63	*61*	*44*	*65*	*57*	*47*	*64*	*54*	*49*				
060.	2.1	1.1	1.1	0.9	-0.5	.00	30	26	.59	.09	.08	.08	.06
	45	*43*	*51*	*47*	*42*	*41*	*44*	*44*	*48*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 7.1 Program Measures (Raw and Standardized Values) in Political Science

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
061.	Rice University	10	9	9	.17	6.8	.58	.25
	*Political Science**	*36*	*40*	*40*	*43*	*62*	*43*	*50*
062.	Rochester, University of	15	20	26	.48	7.0	.70	.44
	Political Science	*41*	*44*	*44*	*64*	*60*	*52*	*63*
063.	Rutgers, The State University-New Brunswick	47	60	96	.20	7.7	.60	.22
	Political Science	*78*	*59*	*61*	*44*	*55*	*44*	*48*
064.	SUNY at Albany	25	14	60	.25	11.0	.60	.20
	Political Science	*53*	*42*	*52*	*48*	*30*	*44*	*46*
065.	SUNY at Binghamton	11	25	25	.19	7.6	.32	.00
	Political Science	*37*	*46*	*44*	*44*	*55*	*22*	*33*
066.	SUNY at Buffalo	22	27	35	.40	7.0	.77	.37
	Political Science	*49*	*47*	*46*	*58*	*60*	*57*	*58*
067.	Southern California, University of	18	17	42	.19	7.5	.53	.07
	Political Science	*45*	*43*	*48*	*44*	*56*	*39*	*37*
068.	Southern Illinois University-Carbondale	[illegible]	24	13	.08	8.5	.65	.31
	Political Science	*47*	*46*	*41*	*37*	*49*	*48*	*54*
069.	Stanford University	24	43	58	.64	8.7	.70	.34
	Political Science	*52*	*53*	*52*	*74*	*47*	*51*	*56*
070.	Syracuse University	25	24	31	.13	5.9	.74	.19
	Political Science	*53*	*46*	*45*	*40*	*68*	*55*	*46*
071.	Temple University	16	14	60	.08	10.0	.62	.15
	Political Science	*42*	*42*	*52*	*36*	*38*	*45*	*43*
072.	Tennessee, University of-Knoxville	19	23	24	.04	9.0	.67	.37
	Political Science	*46*	*45*	*44*	*34*	*45*	*49*	*58*
073.	Texas, University of-Austin	37	37	63	.32	9.3	.77	.34
	Government	*66*	*51*	*53*	*53*	*43*	*57*	*56*
074.	Tulane University	12	7	13	.55	8.6	.50	.10
	Political Science	*38*	*40*	*41*	*68*	*48*	*36*	*39*
075.	Utah, University of-Salt Lake City	19	16	16	.09	7.8	.55	.09
	Political Science	*46*	*43*	*42*	*37*	*54*	*40*	*39*
076.	Vanderbilt University	19	9	19	.60	8.5	.90	.40
	Political Science	*46*	*40*	*43*	*72*	*49*	*67*	*60*
077.	Virginia, University of	28	48	22	.32	6.1	.51	.26
	Government and Foreign Affairs	*56*	*55*	*43*	*53*	*66*	*37*	*50*
078.	Washington University-Saint Louis	18	17	19	.38	8.0	.67	.33
	Political Science	*45*	*43*	*43*	*57*	*52*	*49*	*55*
079.	Washington, University of-Seattle	22	41	26	.30	9.2	.57	.23
	Political Science	*49*	*52*	*44*	*51*	*44*	*41*	*48*
080.	West Virginia University	22	18	8	.11	10.0	.71	.00
	Political Science	*49*	*44*	*40*	*39*	*38*	*52*	*33*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 7.1 Program Measures (Raw and Standardized Values) in Political Science

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
061.	1.6	1.0	1.1	0.6	-1.4	.00	NA	19	.80	.13	.12	.11	.07
	40	42	51	42	33	41		41	62				
062.	3.7	2.3	1.1	1.5	-0.6	.20	NA	29	.53	.08	.07	.06	.06
	61	65	52	62	41	69		45	44				
063.	3.0	1.7	1.3	1.2	0.8	.02	1356	70	.60	.08	.07	.08	.06
	54	55	59	54	56	44	60	60	48				
064.	2.0	1.2	1.1	0.7	-1.0	.08	NA	59	.76	.10	.10	.08	.06
	44	45	51	43	38	52		56	59				
065.	2.0	1.2	1.2	0.8	NA	.09	422	9	.46	.12	.10	.10	.07
	44	45	54	45		54	49	37	38				
066.	2.5	1.5	0.8	0.9	0.3	.00	NA	45	.55	.10	.09	.08	.06
	49	51	38	48	50	41		51	44				
067.	2.6	1.3	1.2	1.0	0.4	.06	65	33	.78	.10	.09	.09	.06
	50	47	56	51	51	49	45	46	60				
068.	1.2	0.7	0.8	0.6	-0.2	.10	12	39	.45	.11	.10	.10	.06
	36	36	37	41	46	55	44	48	38				
069.	4.2	2.4	0.8	1.7	2.0	.00	125	55	.75	.08	.06	.08	.05
	66	67	39	67	68	41	45	54	58				
070.	2.5	1.6	0.9	1.0	-0.3	.12	337	36	.60	.09	.08	.08	.07
	49	52	41	50	44	58	48	47	48				
071.	2.1	1.1	0.9	0.9	-0.4	.00	16	28	.56	.11	.10	.08	.07
	45	44	43	47	43	41	44	44	46				
072.	1.8	0.9	1.1	0.6	-0.4	.00	18	24	.53	.12	.09	.10	.06
	42	40	50	39	44	41	44	43	43				
073.	3.0	1.7	1.0	1.0	1.6	.03	1115	69	.54	.09	.08	.11	.06
	54	54	46	51	64	45	57	60	44				
074.	1.4	0.9	0.9	0.6	-1.0	.00	NA	17	.67	.14	.12	.12	.06
	38	39	41	39	37	41		40	53				
075.	1.1	0.6	1.0	0.3	-0.6	.00	NA	13	.47	.12	.11	.04	.05
	35	33	45	34	41	41		39	40				
076.	2.8	1.6	1.0	1.1	-0.7	.00	NA	21	.47	.09	.09	.08	.07
	52	52	49	52	40	41		42	40				
077.	2.7	1.6	1.2	1.0	0.7	.00	249	51	.61	.09	.08	.09	.07
	52	52	58	49	55	41	47	53	49				
078.	3.3	2.1	1.3	1.3	-0.4	.06	NA	[illegible]	.44	.08	.07	.08	.06
	57	61	59	58	44	49		39	38				
079.	3.0	1.6	1.4	1.2	1.5	.09	393	36	.55	.08	.08	.08	.07
	54	53	66	55	62	54	49	47	44				
080.	1.0	0.6	1.1	0.3	NA	.00	385	18	.36	.12	.10	.10	.05
	34	34	52	34		41	48	41	32				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 7.1 Program Measures (Raw and Standardized Values) in Political Science

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
081.	Wisconsin, University of-Madison	36	56	111	.54	7.4	.79	.48
	Political Science	*65*	*57*	*64*	*68*	*57*	*58*	*65*
082.	Wisconsin, University of-Milwaukee	17	10	14	.30	NA	.90	.50
	Political Science	*44*	*41*	*42*	*51*		*67*	*67*
083.	Yale University	32	68	103	.50	7.9	.82	.50
	Political Science	*61*	*62*	*62*	*65*	*53*	*61*	*67*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 7.1 Program Measures (Raw and Standardized Values) in Political Science

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
081.	4.1	2.4	1.0	1.7	1.6	.11	344	110	.72	.07	.06	.07	.05
	66	*66*	*49*	*68*	*63*	*57*	*48*	*75*	*57*				
082.	2.2	1.3	1.4	0.9	NA	.24	592	37	.77	.11	.10	.08	.08
	46	*48*	*67*	*47*		*74*	*51*	*48*	*59*				
083.	4.8	2.7	1.0	1.8	2.1	.16	80	96	.84	.05	.06	.07	.04
	72	*72*	*45*	*70*	*69*	*63*	*45*	*70*	*65*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 7.2 Summary Statistics Describing Each Program Measure--Political Science

Measure	Number of Programs Evaluated	Mean	Standard Deviation	DECILES								
				1	2	3	4	5	6	7	8	9
Program Size												
01 Raw Value	83	23	9	12	16	18	19	22	23	25	28	35
Std Value	83	50	10	38	42	45	46	49	50	53	56	64
02 Raw Value	82	35	28	13	16	18	22	25	31	39	48	68
Std Value	82	50	10	42	43	44	45	46	48	51	55	62
03 Raw Value	83	50	43	15	20	26	32	40	47	60	66	101
Std Value	83	50	10	42	43	44	46	48	49	52	54	62
Program Graduates												
04 Raw Value	78	.28	.15	.09	.13	.16	.20	.26	.31	.39	.42	.48
Std Value	78	50	10	37	40	42	45	49	52	57	59	63
05 Raw Value	77	8.3	1.4	10.2	9.5	9.1	8.5	8.2	7.9	7.6	7.3	6.5
Std Value	77	50	10	36	41	44	49	51	53	55	58	63
06 Raw Value	78	.68	.13	.50	.57	.60	.67	.70	.73	.76	.78	.82
Std Value	78	50	10	36	42	44	49	52	54	56	58	61
07 Raw Value	78	.26	.15	.08	.10	.17	.20	.22	.30	.36	.40	.46
Std Value	78	50	10	38	39	44	46	47	53	57	59	63
Survey Results												
08 Raw Value	83	2.6	1.0	1.3	1.7	2.0	2.2	2.6	2.8	3.0	3.4	3.8
Std Value	83	50	10	37	41	44	46	50	52	54	58	62
09 Raw Value	83	1.5	.6	.8	1.0	1.1	1.3	1.4	1.6	1.7	2.0	2.3
Std Value	83	50	10	38	41	43	47	49	52	54	60	65
10 Raw Value	83	1.1	.2	.8	.9	1.0	1.0	1.0	1.1	1.1	1.2	1.3
Std Value	83	50	10	38	43	47	47	47	52	52	56	61
11 Raw Value	83	1.0	.4	.5	.6	.7	.9	1.0	1.1	1.2	1.3	1.6
Std Value	83	50	10	38	40	43	48	50	53	55	58	65
University Library												
12 Raw Value	71	.2	1.0	-.9	-.6	-.4	-.3	.0	.3	.7	.9	1.7
Std Value	71	50	10	38	42	44	45	48	51	55	57	65
Research Support												
13 Raw Value	80	.06	.07	.00	.00	.00	.03	.05	.07	.10	.11	.15
Std Value	80	50	10	41	41	41	46	49	51	56	57	63
14 Raw Value	58	520	848	21	57	88	182	251	378	467	602	1245
Std Value	58	50	10	44	45	45	46	47	48	49	51	59
Publication Records												
17 Raw Value	83	43	27	14	20	24	31	38	49	54	61	77
Std Value	83	50	10	39	41	43	45	48	52	54	57	63
18 Raw Value	80	.63	.15	.44	.48	.54	.58	.61	.66	.72	.77	.81
Std Value	80	50	10	37	40	44	47	49	52	56	59	62

NOTE: Standardized values reported in the preceding table have been computed from exact values of the mean and standard deviation and not the rounded values reported here.

TABLE 7.3 Intercorrelations Among Program Measures on 83 Programs in Political Science

	Measure															
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	17	18
Program Size																
01		.56	.51	.25	-.09	.19	.29	.63	.61	.15	.56	.65	.07	.55	.78	.13
02			.82	.23	.03	.06	.20	.60	.56	-.04	.58	.66	.24	.43	.50	.18
03				.20	-.12	.08	.11	.47	.41	-.12	.44	.51	.05	.27	.42	.20
Program Graduates																
04					-.06	.32	.32	.64	.64	-.01	.62	.44	.25	.32	.34	.24
05						.05	.34	.10	.15	.19	.11	-.05	.17	-.12	-.04	-.01
06							.59	.30	.34	.19	.27	.25	.28	.11	.29	.25
07								.52	.57	.22	.50	.40	.39	.20	.46	.28
Survey Results																
08									.98	.13	.98	.74	.40	.43	.71	.44
09										.15	.97	.69	.43	.39	.70	.44
10											.11	.11	.17	-.06	.17	.14
11												.70	.41	.41	.69	.45
University Library																
12													.18	.40	.71	.37
Research Support																
13														.35	.26	.23
14															.59	.04
Publication Records																
17																.59
18																

NOTE: Since in computing correlation coefficients program data must be available for both of the measures being correlated, the actual number of programs on which each coefficient is based varies.

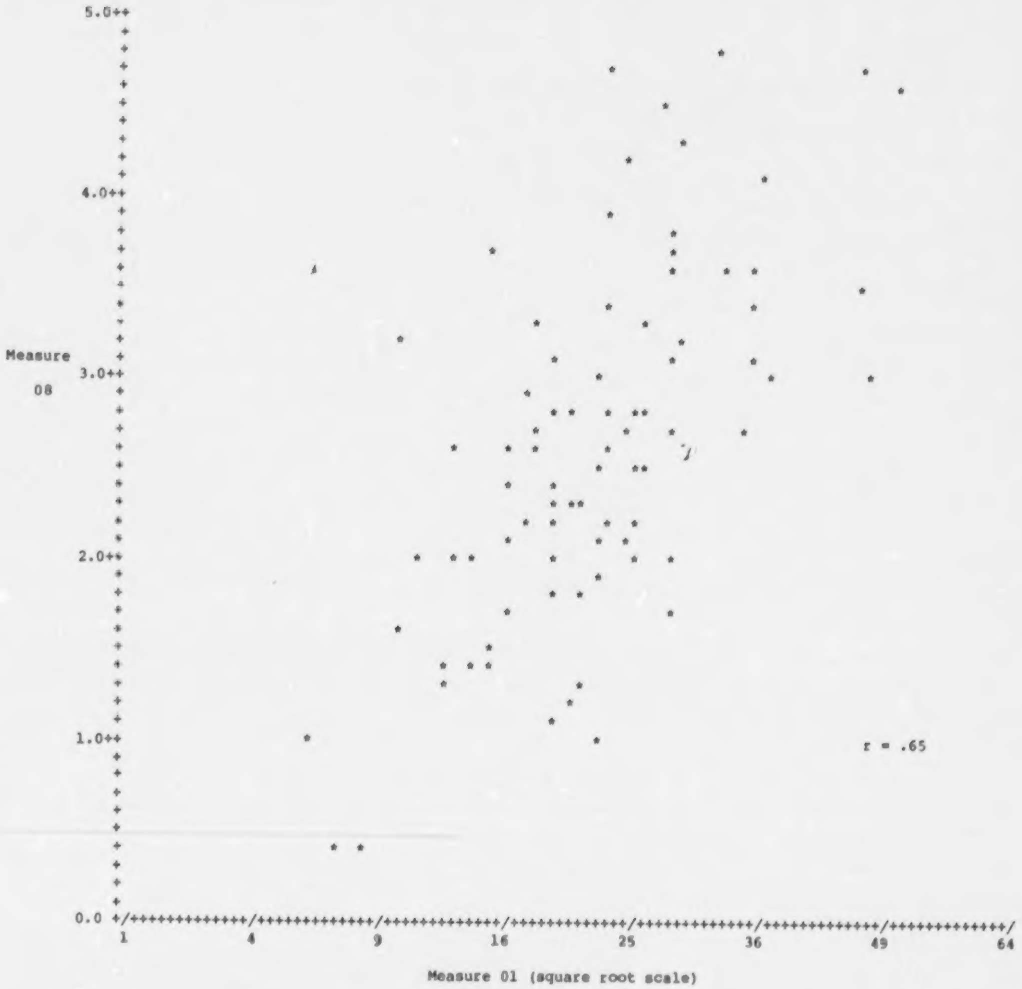


FIGURE 7.1 Mean rating of scholarly quality of faculty (measure 08) versus number of faculty members (measure 01)--83 programs in political science.

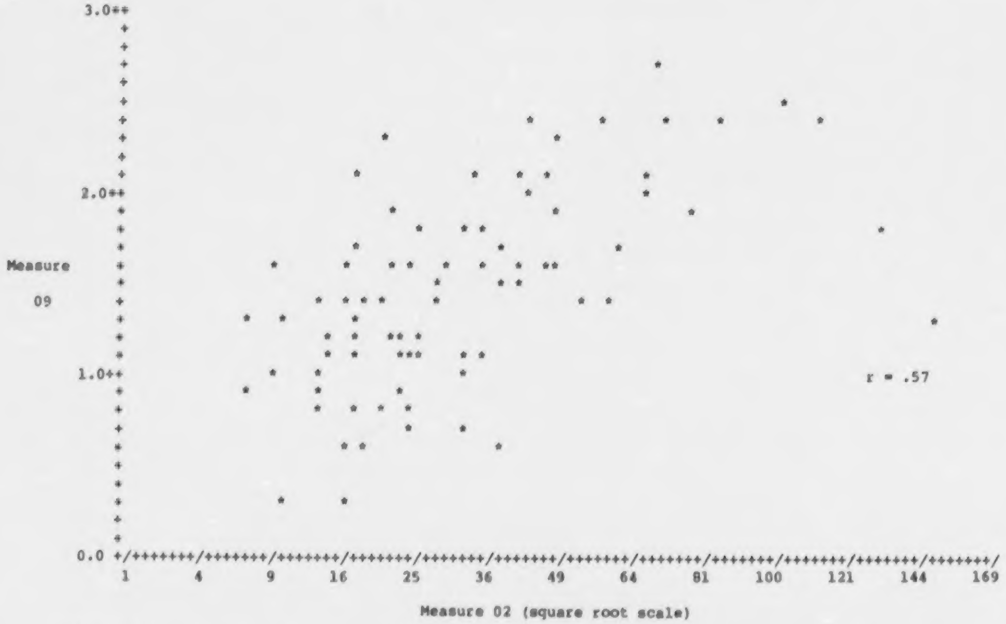
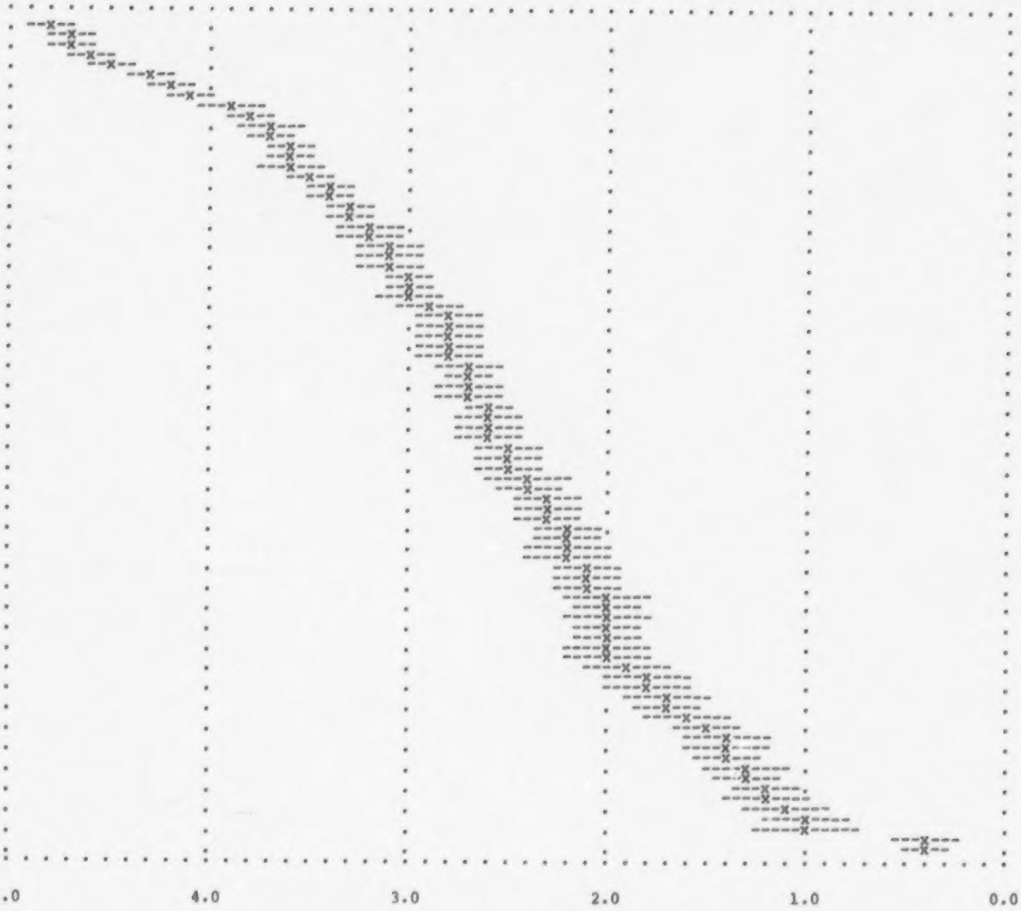


FIGURE 7.2 Mean rating of program effectiveness in educating research scholars/scientists (measure 09) versus number of graduates in last five years (measure 02)--82 programs in political science.

TABLE 7.4 Characteristics of Survey Participants in Political Science

	Respondents	
	N	%
Field of Specialization		
International Relations	16	11
Political Science	117	77
Other/Unknown	19	13
Faculty Rank		
Professor	80	53
Associate Professor	49	32
Assistant Professor	21	14
Other/Unknown	2	1
Year of Highest Degree		
Pre-1950	9	6
1950-59	25	16
1960-69	57	38
Post-1969	60	40
Unknown	1	1
Evaluator Selection		
Nominated by Institution	141	93
Other	11	7
Survey Form		
With Faculty Names	137	90
Without Names	15	10
Total Evaluators	152	100



Mean Survey Rating (measure 08)

FIGURE 7.3 Mean rating of scholarly quality of faculty in 83 programs in political science.

NOTE: Programs are listed in sequence of mean rating, with the highest-rated program appearing at the top of the page. The broken lines (---) indicate a confidence interval of ±1.5 standard errors around the reported mean (x) of each program.

VIII
Psychology Programs

In this chapter 150 research-doctorate programs in psychology are assessed. These programs, according to the information supplied by their universities, have accounted for 10,582 doctoral degrees awarded during the FY1976-80 period--approximately 70 percent of the aggregate number of psychology doctorates earned from U.S. universities in this five-year span.[1] The relatively low percentage of doctorates covered in this discipline may be explained, in part, by the decisions of some study coordinators not to include university programs in clinical psychology, counseling, and/or educational psychology. These three fields account for more than half of the doctoral degrees awarded in psychology in recent years. On the average, 102 full-time and part-time students intending to earn doctorates were enrolled in a program in December 1980, with an average faculty size of 29 members.[2] Five programs were initiated since 1970, and each of two universities--University of California at Irvine and University of Kansas--has two psychology programs included in the assessment. In addition to the 148 institutions represented in this discipline, another 10 were initially identified as meeting the criteria[3] for inclusion in the assessment:

American University
Boston College
University of Nevada--Reno
University of Northern Colorado--Greeley

---

[1] Data from the NRC's Survey of Earned Doctorates indicate that a total of 15,066 doctorates in fields of psychology were awarded by U.S. universities between FY1976 and FY1980. Of this total, 5,023 were in clinical psychology, 1,414 in counseling, and 1,417 in educational/school psychology.

[2] See the reported means for measures 03 and 01 in Table 9.2.

[3] As mentioned in Chapter I, the primary criterion for inclusion was that a university had awarded at least 22 doctorates in psychology during the FY1976-78 period.

California School of Professional
  Psychology--Fresno
California School of Professional
  Psychology--Los Angeles
Memphis State University
University of Texas, Health Science
  Center--Dallas
Saint John's University
U.S. International University

The last six institutions chose not to participate in the assessment in any discipline. Psychology programs at the other four institutions have not been included in the evaluations in this discipline, since in each case the study coordinator either indicated that the institution did not at that time have a research-doctorate program in psychology or failed to provide the information requested by the committee. It should be mentioned that the U.S. International University alone accounted for more than 700 doctorates awarded in the FY1976-80 period.

Before examining individual program results presented in Table 8.1, the reader is urged to refer to Chapter II, in which each of the 16 measures* used in the assessment is discussed. Summary statistics describing every measure are given in Table 8.2. For all but two of the measures, data are reported for at least 130 of the 150 psychology programs. For measure 12, a composite index of the size of a university library, data are available for 86 programs; for measure 14, the total university expenditures for research in this discipline, data are available for 79 programs. The programs not evaluated on measures 12 and 14 are typically smaller--in terms of faculty size and graduate student enrollment--than other psychology programs. Were data on these two measures available for all 150 programs, it is likely that their reported means would be appreciably lower (and that some of the correlations of these measures with others would be higher).

Intercorrelations among the 16 measures (Pearson product-moment coefficients) are given in Table 8.3. Of particular note are the high positive correlations of the reputational survey ratings (08 and 09) with the fraction of recent graduates employed in Ph.D.-granting universities (measure 07), the university library size (measure 12), and the total number of recently published articles by program faculty (measure 17). Figure 8.1 illustrates the relation between the mean rating of the scholarly quality of faculty (measure 08) and the number of faculty members (measure 01) for each of 150 programs in psychology. Figure 8.2 plots the mean rating of program effectiveness (measure 09) against the total number of FY1976-80 program graduates (measure 02). Although in both figures there is a significant positive correlation between program size and reputational rating, it is quite apparent that some of the smaller programs received high mean ratings.

---

*In psychology, data are also available on measure 15, the number of published (1978-79) articles attributed to a program, and measure 16, the estimated "overall influence" of these articles. These measures are reported in Appendix J and differ markedly from measures 17 and 18 reported here. For a discussion of measures 15 and 16, see the committee's report on the mathematical and physical sciences.

Table 8.4 describes the 280 faculty members who participated in the evaluation of psychology programs. These individuals constituted 62 percent of those asked to respond to the survey in this discipline and 7 percent of the faculty population in the 150 research-doctorate programs being evaluated.[5] More than three-fourths of the survey participants were in nonclinical areas of psychology, with the largest numbers in experimental and social psychology. A majority of the survey participants had earned their highest degree prior to 1970, and approximately half held the rank of full professor.

To assist the reader in interpreting results of the survey evaluations, estimated standard errors have been computed for mean ratings of the scholarly quality of faculty in 150 psychology programs (and are given in Table 8.1). For each program the mean rating and an associated "confidence interval" of 1.5 standard errors are illustrated in Figure 8.3 (listed in order of highest to lowest mean rating). In comparing two programs, if their confidence intervals do not overlap, one may conclude that there is a significant difference in their mean ratings at a .05 level of significance.[6] From this figure it is also apparent that one should have somewhat more confidence in the accuracy of the mean ratings of higher-rated programs than lower-rated programs. This generalization results primarily from the fact that evaluators are not as likely to be familiar with the less prestigious programs, and consequently the mean ratings of these programs are usually based on fewer survey responses.

---

[5] See Table 2.3 in Chapter II.

[6] See pp. 30-32 for a discussion of the interpretation of mean ratings and associated confidence intervals.

TABLE 8.1 Program Measures (Raw and Standardized Values) in Psychology

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
001.	Adelphi University	13	19	43	.16	5.8	.52	.13
	Psychology	*41*	*39*	*42*	*40*	*55*	*33*	*42*
002.	Alabama, University of-Tuscaloosa	23	45	102	.52	5.6	.68	.27
	Experimental and Clinical Psychology	*47*	*45*	*50*	*56*	*56*	*49*	*52*
003.	Arizona State University-Tempe	21	71	86	.39	5.4	.61	.16
	Psychology	*46*	*50*	*48*	*50*	*59*	*42*	*45*
004.	Arizona, University of-Tucson	29	72	89	.67	5.3	.54	.14
	Psychology	*50*	*50*	*48*	*62*	*60*	*35*	*43*
005.	Arkansas, University-Fayetteville	20	38	41	.32	7.1	.68	.11
	Psychology	*45*	*43*	*42*	*47*	*40*	*48*	*41*
006.	Auburn University	33	50	70	.07	5.3	.88	.16
	Psychology	*52*	*46*	*46*	*36*	*60*	*68*	*45*
007.	Baylor University-Waco	8	NA	8	.03	5.4	.55	.13
	*Psychology**	*39*		*37*	*35*	*58*	*36*	*42*
008.	Boston University	38	111	189	.66	8.0	.65	.09
	Psychology	*55*	*58*	*62*	*62*	*30*	*46*	*40*
009.	Bowling Green State University	31	82	89	.30	5.4	.76	.21
	Psychology	*51*	*52*	*48*	*46*	*58*	*56*	*48*
010.	Brandeis University	14	14	18	.33	7.1	.87	.40
	Psychology	*42*	*38*	*38*	*48*	*40*	*67*	*62*
011.	Brigham Young University	18	44	75	.09	5.3	.82	.18
	Psychology	*44*	*44*	*46*	*37*	*59*	*62*	*46*
012.	Brown University	16	28	26	.52	5.2	.85	.70
	Psychology	*43*	*41*	*40*	*56*	*61*	*65*	*84*
013.	Bryn Mawr College	7	11	10	NA	NA	NA	NA
	Psychology	*38*	*37*	*37*				
014.	CUNY-Graduate School	158	233	509	.22	7.8	.58	.16
	Psychology	*99*	*84*	*99*	*43*	*33*	*39*	*45*
015.	California Schl of Prof Psychology-Berkeley	21	225	242	.14	6.5	.74	.12
	*Psychology**	*46*	*82*	*69*	*39*	*47*	*54*	*41*
016.	California Schl of Prof Psychology-San Diego	17	213	266	.02	5.1	.78	.07
	*Psychology**	*44*	*80*	*73*	*34*	*62*	*59*	*38*
017.	California, University of-Berkeley	40	104	124	.64	7.4	.70	.28
	Psychology	*56*	*57*	*53*	*60*	*37*	*51*	*53*
018.	California, University of-Davis	22	19	30	.23	5.4	.77	.39
	Psychology	*46*	*39*	*40*	*43*	*58*	*57*	*61*
019.	California, University of-Irvine	20	41	39	.16	6.0	.57	.19
	Cognitive Sci/Social Relations (Social Sci)	*45*	*44*	*41*	*40*	*52*	*38*	*47*
020.	California, University of-Irvine	15	29	30	.95	4.6	.86	.67
	Psychobiology (Schl of Biological Science)	*43*	*41*	*40*	*74*	*67*	*66*	*82*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 8.1 Program Measures (Raw and Standardized Values) in Psychology

Prog	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
No.	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
001.	1.2	0.8	0.7	0.3	NA	.08	NA	14	.39	.12	.11	.14	.05
	37	*33*	*35*	*40*		*43*		*39*	*33*				
002.	2.4	1.5	1.1	0.5	-1.3	.00	NA	28	.52	.18	.15	.10	.07
	48	*48*	*51*	*44*	*36*	*38*		*42*	*42*				
003.	2.6	1.6	1.1	0.8	-0.3	.24	457	91	.95	.10	.08	.11	.07
	51	*50*	*49*	*52*	*46*	*52*	*45*	*52*	*68*				
004.	2.3	1.4	1.3	0.6	0.9	.03	NA	61	.66	.11	.11	.15	.07
	48	*47*	*58*	*47*	*58*	*40*		*47*	*50*				
005.	1.4	1.0	0.8	0.2	NA	.00	NA	45	.50	.12	.16	.11	.04
	38	*38*	*36*	*38*		*38*		*44*	*40*				
006.	1.7	0.9	1.6	0.3	NA	.00	NA	122	.67	.17	.23	.15	.06
	41	*37*	*71*	*40*		*38*		*57*	*50*				
007.	1.1	0.8	1.0	0.2	NA	NA	NA	2	NA	.17	.15	.16	.05
	35	*33*	*44*	*38*				*37*					
008.	2.9	1.7	1.3	0.7	-0.4	.13	NA	68	.68	.11	.08	.09	.06
	53	*52*	*58*	*49*	*46*	*46*		*48*	*51*				
009.	2.4	1.7	1.1	0.6	NA	.19	500	90	.74	.10	.08	.10	.06
	49	*53*	*49*	*48*		*49*	*45*	*51*	*55*				
010.	2.6	1.5	0.9	0.7	NA	.43	253	33	.64	.12	.10	.13	.06
	50	*48*	*42*	*49*		*63*	*43*	*42*	*49*				
011.	1.6	NA	NA	0.2	-0.6	.11	NA	34	.61	.16	NA	NA	.04
	40			*38*	*43*	*45*		*43*	*47*				
012.	3.6	2.2	0.9	1.0	-1.1	.63	449	49	.75	.13	.09	.10	.08
	61	*62*	*40*	*56*	*39*	*74*	*45*	*45*	*55*				
013.	1.9	1.5	0.9	0.4	NA	NA	NA	26	NA	.23	.20	.11	.08
	43	*48*	*41*	*44*				*41*					
014.	3.6	2.0	0.8	1.1	NA	.13	342	186	.42	.10	.07	.11	.07
	61	*58*	*39*	*59*		*46*	*44*	*67*	*35*				
015.	1.0	0.5	1.2	0.3	NA	.00	NA	4	.19	.20	.13	.12	.05
	35	*28*	*55*	*40*		*38*		*38*	*21*				
016.	0.7	0.2	1.2	0.3	NA	.00	NA	5	.24	.18	.10	.09	.05
	31	*22*	*54*	*39*		*38*		*38*	*24*				
017.	4.4	2.3	0.9	1.6	2.2	.53	2204	130	.83	.08	.08	.07	.06
	69	*65*	*40*	*71*	*71*	*69*	*61*	*58*	*60*				
018.	2.3	1.5	0.9	0.5	0.6	.23	NA	92	.86	.11	.10	.16	.05
	48	*48*	*44*	*45*	*56*	*51*		*52*	*62*				
019.	2.7	1.5	1.1	0.4	NA	.15	NA	22	.40	.18	.13	.17	.07
	51	*48*	*49*	*44*		*47*		*41*	*34*				
020.	3.1	1.9	1.2	0.5	NA	.67	NA	27	.53	.15	.10	.16	.06
	55	*57*	*55*	*44*		*77*		*41*	*42*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 8.1 Program Measures (Raw and Standardized Values) in Psychology

Prog No.	University - Department/Academic Unit	Program Size (01)	Program Size (02)	Program Size (03)	Characteristics of Program Graduates (04)	Characteristics of Program Graduates (05)	Characteristics of Program Graduates (06)	Characteristics of Program Graduates (07)
021.	California, University of-Los Angeles	68	138	189	.68	6.3	.70	.36
	Psychology	*71*	*64*	*62*	*62*	*49*	*51*	*59*
022.	California, University of-Riverside	14	28	47	.59	6.1	.62	.35
	Psychology	*42*	*41*	*42*	*58*	*51*	*43*	*59*
023.	California, University of-San Diego	22	56	35	.66	5.8	.83	.44
	Psychology	*46*	*47*	*41*	*62*	*54*	*63*	*65*
024.	California, University of-Santa Barbara	25	40	54	.53	6.4	.70	.40
	Psychology	*48*	*43*	*43*	*56*	*48*	*51*	*62*
025.	Carnegie-Mellon University	17	16	15	.81	6.3	.88	.47
	Psychology and Education	*44*	*38*	*38*	*68*	*49*	*68*	*67*
026.	Case Western Reserve University	13	51	10	.65	5.8	.73	.18
	Clinical Psychology	*41*	*46*	*37*	*61*	*54*	*53*	*46*
027.	Catholic University of America	19	116	163	.27	8.3	.66	.05
	Psychology	*45*	*59*	*58*	*45*	*27*	*47*	*36*
028.	Chicago, University of	60	57	217	.65	7.4	.77	.45
	Behavioral Sciences	*67*	*47*	*66*	*61*	*37*	*58*	*66*
029.	Cincinnati, University of	39	76	131	.45	6.1	.65	.24
	Psychology	*56*	*51*	*54*	*53*	*51*	*46*	*50*
030.	Claremont Graduate School	21	37	112	.70	9.8	.64	.23
	Psychology	*46*	*43*	*51*	*63*	*11*	*45*	*49*
031.	Clark University	16	18	37	.87	7.8	.93	.33
	Psychology	*43*	*39*	*41*	*70*	*33*	*73*	*57*
032.	Colorado State University-Fort Collins	29	50	64	.04	6.8	.67	.18
	Psychology	*50*	*46*	*45*	*35*	*44*	*48*	*46*
033.	Colorado, University of	45	123	155	.75	6.3	.60	.26
	Psychology	*59*	*61*	*57*	*65*	*48*	*41*	*52*
034.	Columbia Teachers College	37	222	300	.43	8.4	.59	.13
	Psychology	*55*	*82*	*77*	*52*	*26*	*40*	*42*
035.	Columbia University	18	41	37	.37	6.6	.79	.33
	Psychology	*44*	*44*	*41*	*49*	*45*	*58*	*57*
036.	Connecticut, University of-Storrs	44	90	119	.62	6.2	.73	.31
	Psychology	*58*	*54*	*52*	*60*	*50*	*54*	*55*
037.	Cornell University-Ithaca	34	56	38	.60	6.2	.77	.35
	Psychology	*53*	*47*	*41*	*59*	*50*	*57*	*58*
038.	Delaware, University of-Newark	20	45	61	.26	6.5	.62	.13
	Psychology	*45*	*45*	*44*	*45*	*47*	*43*	*42*
039.	Denver, University of	30	45	84	.65	6.9	.56	.15
	Psychology	*51*	*45*	*48*	*61*	*42*	*38*	*43*
040.	DePaul University	18	34	65	.19	6.4	.82	.11
	Psychology	*44*	*42*	*45*	*41*	*47*	*62*	*41*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 8.1 Program Measures (Raw and Standardized Values) in Psychology

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
021.	4.3	2.3	1.3	1.5	2.0	.44	2766	319	.82	.07	.07	.07	.06
	68	*65*	*57*	*69*	*69*	*64*	*66*	*88*	*60*				
022.	2.1	1.4	0.8	0.5	-1.0	.29	224	65	.79	.14	.14	.14	.07
	46	*46*	*39*	*45*	*39*	*55*	*43*	*47*	*58*				
023.	4.2	2.3	1.4	1.4	-0.0	.59	693	79	.77	.09	.07	.08	.07
	66	*63*	*64*	*65*	*49*	*72*	*47*	*50*	*57*				
024.	3.3	1.9	1.1	1.0	-0.1	.48	480	91	.72	.09	.08	.10	.07
	57	*57*	*51*	*57*	*48*	*66*	*45*	*52*	*54*				
025.	4.0	2.3	1.6	1.2	NA	.35	847	79	.82	.09	.07	.07	.07
	65	*65*	*72*	*62*		*59*	*49*	*50*	*60*				
026.	1.7	1.2	0.4	0.3	-1.3	.08	397	19	.46	.17	.16	.16	.05
	41	*43*	*22*	*40*	*36*	*43*	*44*	*40*	*38*				
027.	2.2	1.4	1.1	0.5	NA	.11	NA	28	.79	.15	.14	.10	.07
	46	*47*	*52*	*44*		*44*		*42*	*58*				
028.	4.2	2.2	1.1	1.4	0.9	.40	1114	187	.82	.08	.07	.09	.07
	67	*62*	*51*	*66*	*58*	*61*	*51*	*67*	*60*				
029.	2.3	1.5	0.9	0.6	-0.2	.00	NA	84	.62	.12	.09	.09	.07
	48	*47*	*40*	*49*	*47*	*38*		*51*	*47*				
030.	2.4	1.4	1.3	0.5	NA	.29	NA	54	.81	.14	.13	.10	.06
	49	*46*	*60*	*46*		*55*		*46*	*59*				
031.	2.4	1.6	0.9	0.7	NA	.19	NA	32	.75	.12	.09	.09	.07
	49	*51*	*42*	*50*		*49*		*42*	*55*				
032.	1.8	1.2	1.1	0.3	-1.1	.17	NA	96	.83	.13	.10	.11	.05
	42	*42*	*49*	*41*	*38*	*48*		*52*	*60*				
033.	3.9	2.2	1.3	1.4	-0.9	.31	2197	203	.76	.08	.06	.09	.07
	64	*63*	*60*	*66*	*41*	*56*	*61*	*69*	*56*				
034.	3.0	1.7	0.7	0.8	NA	.08	240	50	.54	.11	.10	.10	.07
	54	*52*	*36*	*53*		*43*	*43*	*45*	*43*				
035.	4.0	2.2	0.7	1.3	1.7	.44	365	55	.83	.10	.06	.09	.08
	64	*62*	*32*	*65*	*67*	*64*	*44*	*46*	*61*				
036.	3.4	2.0	1.2	1.1	-0.5	.21	2886	120	.73	.08	.06	.09	.07
	58	*50*	*55*	*60*	*44*	*50*	*68*	*56*	*54*				
037.	3.9	2.1	1.3	1.3	1.6	.29	2155	72	.71	.09	.06	.10	.07
	63	*61*	*58*	*65*	*66*	*55*	*61*	*49*	*53*				
038.	2.0	1.3	1.3	0.5	NA	.25	NA	49	.50	.13	.12	.11	.06
	45	*44*	*57*	*45*		*53*		*45*	*40*				
039.	3.0	1.8	1.4	0.9	NA	.37	704	73	.73	.12	.09	.09	.08
	54	*53*	*65*	*54*		*59*	*47*	*49*	*54*				
040.	1.1	0.8	NA	0.2	NA	.00	NA	35	.56	.14	.17	NA	.04
	36	*34*		*38*		*38*		*43*	*44*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 8.1 Program Measures (Raw and Standardized Values) in Psychology

Prog No.	University - Department/Academic Unit	Program Size (01)	Program Size (02)	Program Size (03)	Characteristics of Program Graduates (04)	Characteristics of Program Graduates (05)	Characteristics of Program Graduates (06)	Characteristics of Program Graduates (07)
041.	Detroit, University of	11	27	50	.07	5.8	.93	.00
	Psychology	*40*	*41*	*43*	*36*	*55*	*73*	*33*
042.	Duke University	33	64	81	.94	5.9	.63	.39
	Psychology	*52*	*49*	*47*	*74*	*53*	*44*	*61*
043.	Emory University	20	46	60	.67	5.6	.60	.24
	Psychology	*45*	*45*	*44*	*62*	*56*	*41*	*51*
044.	Florida State University-Tallahassee	29	112	149	.64	5.5	.71	.24
	Psychology	*50*	*59*	*56*	*61*	*58*	*52*	*50*
045.	Florida, University of-Gainesville	41	126	178	.57	5.7	.63	.27
	Psychology	*57*	*62*	*60*	*58*	*56*	*44*	*53*
046.	Fordham University	30	76	139	.25	7.5	.69	.09
	Psychology	*51*	*51*	*55*	*44*	*36*	*50*	*39*
047.	Fuller Theological Seminary-Pasadena	14	57	150	.10	8.5	.67	.08
	Psychology	*42*	*47*	*57*	*38*	*25*	*48*	*38*
048.	George Washington University	19	61	142	.43	7.2	.70	.07
	Psychology	*45*	*48*	*55*	*52*	*39*	*50*	*38*
049.	Georgia State University-Atlanta	29	80	152	.06	7.1	.53	.11
	Psychology	*50*	*52*	*57*	*36*	*40*	*34*	*41*
050.	Georgia, University of-Athens	38	167	200	.28	5.4	.73	.20
	Psychology	*55*	*70*	*63*	*45*	*59*	*53*	*47*
051.	Harvard University	27	113	82	.62	5.8	.71	.51
	Psychology and Social Relations	*49*	*59*	*47*	*60*	*54*	*52*	*70*
052.	Hawaii, University of	25	66	NA	.24	7.0	.49	.13
	Psychology	*48*	*49*		*43*	*41*	*31*	*42*
053.	Hofstra University	7	32	75	.00	6.1	.73	.07
	*Psychology**	*38*	*42*	*46*	*33*	*51*	*54*	*38*
054.	Houston, University of	33	122	146	.51	6.5	.65	.21
	Psychology	*52*	*61*	*56*	*55*	*47*	*46*	*48*
055.	Illinois Institute of Technology	17	86	197	.02	7.0	.57	.06
	Psychology	*44*	*53*	*63*	*34*	*41*	*38*	*37*
056.	Illinois, University of-Chicago Circle	35	29	108	.13	6.0	.71	.18
	Psychology	*53*	*41*	*51*	*39*	*52*	*52*	*46*
057.	Illinois, University-Urbana/Champaign	56	116	145	.56	6.3	.80	.41
	Psychology	*65*	*59*	*56*	*57*	*48*	*61*	*63*
058.	Indiana University-Bloomington	40	79	109	.42	5.6	.88	.43
	Psychology	*56*	*52*	*51*	*51*	*56*	*68*	*64*
059.	Iowa State University-Ames	31	47	50	.23	5.1	.75	.23
	Psychology	*51*	*45*	*43*	*43*	*61*	*56*	*49*
060.	Iowa, University of-Iowa City	32	54	56	.49	5.7	.66	.41
	Psychology	*52*	*46*	*44*	*54*	*55*	*47*	*63*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 8.1 Program Measures (Raw and Standardized Values) in Psychology

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
041.	0.8	NA	NA	0.1	NA	.00	NA	9	.27	.15	NA	NA	.03
	33			*35*		*38*		*39*	*26*				
042.	3.7	2.1	0.9	1.2	0.3	.36	359	75	.70	.09	.06	.10	.07
	61	*60*	*44*	*61*	*53*	*59*	*44*	*49*	*52*				
043.	2.3	1.5	0.8	0.6	-0.6	.25	183	61	.60	.12	.11	.14	.07
	48	*49*	*39*	*49*	*43*	*53*	*42*	*47*	*46*				
044.	2.8	1.7	1.0	0.9	-0.4	.35	1362	65	.69	.11	.09	.11	.08
	53	*53*	*48*	*55*	*45*	*58*	*53*	*47*	*52*				
045.	2.9	1.8	1.1	1.0	0.8	.24	809	155	.76	.09	.08	.10	.07
	54	*54*	*49*	*56*	*57*	*52*	*48*	*62*	*56*				
046.	1.7	1.0	NA	0.2	NA	.00	NA	17	.17	.16	.17	NA	.05
	42	*38*		*39*		*38*		*40*	*20*				
047.	1.4	0.8	NA	0.2	NA	.00	NA	11	.43	.19	.17	NA	.05
	39	*34*		*38*		*38*		*39*	*36*				
048.	1.8	1.1	NA	0.2	NA	.11	NA	21	.37	.16	.11	NA	.05
	42	*41*		*39*		*44*		*40*	*32*				
049.	2.0	1.3	1.4	0.5	NA	.07	230	91	.59	.13	.13	.12	.06
	45	*44*	*61*	*44*		*42*	*43*	*52*	*45*				
050.	2.7	1.7	1.4	0.8	0.4	.13	927	196	.84	.10	.09	.09	.07
	52	*53*	*62*	*53*	*54*	*46*	*49*	*68*	*61*				
051.	4.6	2.3	0.9	1.6	3.0	.52	1664	173	.85	.07	.08	.10	.06
	70	*64*	*41*	*72*	*79*	*68*	*56*	*65*	*62*				
052.	2.6	1.5	1.0	0.7	-0.1	.24	NA	74	.76	.11	.11	.12	.07
	50	*47*	*47*	*51*	*48*	*52*		*49*	*56*				
053.	0.7	0.5	NA	0.2	NA	NA	NA	11	NA	.14	.15	NA	.04
	31	*29*		*38*				*39*					
054.	2.9	1.6	1.6	0.9	-0.9	.19	743	79	.69	.10	.08	.09	.06
	54	*51*	*71*	*55*	*40*	*49*	*48*	*50*	*52*				
055.	1.3	0.7	NA	0.2	NA	.00	265	31	.71	.15	.14	NA	.05
	37	*33*		*39*		*38*	*43*	*42*	*53*				
056.	2.9	1.6	1.4	0.9	NA	.17	215	122	.80	.10	.07	.10	.07
	53	*51*	*62*	*55*		*48*	*43*	*57*	*58*				
057.	4.2	2.5	1.1	1.5	2.0	.32	1948	208	.73	.08	.06	.08	.06
	67	*67*	*51*	*69*	*69*	*57*	*59*	*70*	*54*				
058.	3.9	2.3	1.1	1.2	0.9	.50	992	104	.70	.09	.07	.09	.07
	63	*64*	*50*	*62*	*59*	*67*	*50*	*54*	*52*				
059.	2.1	1.3	0.8	0.3	-0.5	.10	354	101	.71	.16	.16	.14	.06
	45	*45*	*37*	*41*	*44*	*44*	*44*	*53*	*53*				
060.	3.3	2.0	0.7	1.1	0.3	.19	530	120	.69	.10	.08	.11	.07
	58	*59*	*36*	*59*	*52*	*49*	*46*	*56*	*52*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 8.1 Program Measures (Raw and Standardized Values) in Psychology

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
061.	Johns Hopkins University	15	45	48	.76	4.3	.73	.41
	Psychology	*43*	*45*	*43*	*66*	*70*	*54*	*62*
062.	Kansas State University-Manhattan	17	29	24	.45	5.1	.58	.23
	Psychology	*44*	*41*	*39*	*53*	*62*	*39*	*49*
063.	Kansas, University of	42	79	136	.41	6.1	.72	.38
	Human Development and Family Life	*57*	*52*	*55*	*51*	*51*	*52*	*60*
064.	Kansas, University of	44	114	116	.53	6.0	.72	.22
	Psychology	*58*	*59*	*52*	*56*	*52*	*53*	*49*
065.	Kent State University	30	76	120	.22	5.8	.87	.19
	Psychology	*51*	*51*	*52*	*43*	*54*	*67*	*47*
066.	Kentucky, University of	21	46	84	.28	7.0	.77	.19
	Psychology	*46*	*45*	*48*	*45*	*41*	*57*	*46*
067.	Long Island University-Brooklyn Center	10	65	95	.00	6.7	.57	.02
	Psychology	*40*	*49*	*49*	*33*	*45*	*38*	*34*
068.	Louisiana State University-Baton Rouge	18	62	73	.39	6.0	.49	.12
	Psychology	*44*	*48*	*46*	*50*	*52*	*31*	*41*
069.	Louisville, University of	22	43	72	.29	6.0	.74	.24
	Psychology	*46*	*44*	*46*	*46*	*52*	*54*	*50*
070.	Loyola University of Chicago	37	60	130	.25	6.2	.78	.19
	Psychology	*55*	*48*	*54*	*44*	*50*	*58*	*47*
071.	Maryland, University of-College Park	41	98	172	.41	5.4	.74	.16
	Psychology	*57*	*56*	*60*	*51*	*59*	*54*	*45*
072.	Massachusetts Institute of Technology	15	25	31	.80	4.6	.84	.52
	Psychology	*43*	*40*	*40*	*67*	*67*	*64*	*71*
073.	Massachusetts, University of-Amherst	54	133	162	.50	6.2	.70	.27
	Psychology	*64*	*63*	*58*	*55*	*50*	*50*	*52*
074.	Miami University-Ohio	23	52	25	.33	6.9	.82	.13
	Psychology	*47*	*46*	*39*	*48*	*42*	*62*	*42*
075.	Miami, University of-Florida	19	67	69	.45	6.0	.55	.22
	Psychology	*45*	*49*	*45*	*53*	*52*	*37*	*49*
076.	Michigan State University-East Lansing	55	137	175	.57	6.3	.70	.30
	Psychology	*64*	*64*	*60*	*57*	*49*	*51*	*54*
077.	Michigan, University of-Ann Arbor	111	222	259	.64	6.4	.69	.39
	Psychology	*95*	*82*	*72*	*61*	*48*	*50*	*61*
078.	Minnesota, University of	58	162	222	.46	6.9	.72	.29
	Psychology	*66*	*69*	*66*	*53*	*43*	*53*	*54*
079.	Mississippi, University of-Oxford	11	33	65	.17	5.8	.76	.21
	Psychology	*40*	*42*	*45*	*41*	*54*	*56*	*48*
080.	Missouri, University of-Columbia	26	63	58	.39	6.6	.52	.19
	Psychology	*49*	*48*	*44*	*50*	*45*	*33*	*47*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 8.1 Program Measures (Raw and Standardized Values) in Psychology

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
061.	3.8	2.1	0.7	1.1	-0.4	.53	642	66	.87	.10	.06	.09	.07
	62	60	35	60	45	69	47	48	63				
062.	2.5	1.5	0.8	0.5	NA	.18	NA	63	.82	.13	.11	.12	.08
	50	48	40	46		48		47	60				
063.	3.1	1.9	1.0	0.6	0.1	.14	3904	114	.71	.18	.12	.07	.08
	56	57	48	47	50	46	77	55	53				
064.	3.4	2.0	1.3	1.1	0.1	.09	3904	165	.80	.10	.07	.10	.07
	58	59	59	60	50	43	77	63	58				
065.	2.3	1.5	1.0	0.5	-1.8	.20	NA	87	.67	.15	.11	.08	.06
	48	48	47	45	32	50		51	50				
066.	1.9	1.2	1.0	0.4	-0.1	.14	NA	39	.48	.13	.11	.14	.06
	43	43	48	43	49	46		43	39				
067.	1.3	0.6	NA	0.3	NA	.00	NA	3	.20	.15	.13	NA	.05
	38	31		40		38		38	22				
068.	1.8	1.0	0.9	0.3	-0.3	.06	224	10	.39	.14	.14	.14	.05
	42	38	44	41	46	41	43	39	33				
069.	1.9	1.3	1.2	0.4	NA	.14	NA	60	.86	.09	.11	.08	.06
	43	44	55	43		46		47	62				
070.	2.2	1.5	1.2	0.6	NA	.16	238	70	.51	.12	.12	.13	.07
	47	48	53	47		47	43	48	41				
071.	2.9	1.8	1.1	0.9	0.2	.12	684	101	.66	.10	.06	.07	.07
	54	55	51	56	51	45	47	53	50				
072.	3.7	2.3	0.8	0.9	-0.3	.73	1982	39	.87	.12	.11	.09	.08
	62	63	40	56	46	81	59	43	63				
073.	3.3	1.9	1.3	1.2	-0.7	.35	891	132	.72	.08	.05	.09	.07
	57	56	57	61	42	59	49	58	54				
074.	2.1	1.4	1.2	0.4	-0.8	.04	NA	59	.78	.11	.11	.14	.06
	45	46	53	42	42	41		47	57				
075.	2.3	1.3	1.3	0.5	NA	.05	NA	74	.79	.11	.09	.14	.06
	47	44	57	46		41		49	58				
076.	3.1	1.9	1.0	0.9	0.3	.09	1749	150	.71	.10	.06	.10	.07
	56	57	48	55	53	43	57	61	53				
077.	4.5	2.5	0.8	1.6	1.8	.32	4714	274	.70	.07	.07	.07	.06
	70	67	37	70	67	57	85	81	53				
078.	4.3	2.5	1.1	1.6	1.2	.33	3408	221	.74	.08	.06	.07	.06
	68	69	49	71	61	57	72	72	55				
079.	1.1	0.7	1.2	0.3	NA	.09	NA	21	.55	.14	.12	.15	.05
	36	32	53	39		43		40	43				
080.	2.5	1.6	0.8	0.7	-0.2	.23	395	160	.89	.12	.09	.13	.07
	50	50	39	49	48	52	44	63	64				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 8.1 Program Measures (Raw and Standardized Values) in Psychology

Prog No.	University - Department/Academic Unit	Program Size (01)	(02)	(03)	Characteristics of Program Graduates (04)	(05)	(06)	(07)
081.	Montana, University of-Missoula	16	44	52	.46	6.1	.47	.09
	Psychology	*43*	*44*	*43*	*53*	*51*	*29*	*39*
082.	Nebraska, University of-Lincoln	21	67	67	.58	6.2	.61	.19
	Psychology	*46*	*49*	*45*	*58*	*50*	*42*	*47*
083.	New Hampshire, University of	16	24	36	.04	5.5	.77	.23
	Psychology	*43*	*40*	*41*	*35*	*58*	*57*	*50*
084.	New Mexico, University of-Albuquerque	25	35	63	.42	5.8	.69	.22
	Psychology	*48*	*42*	*45*	*51*	*54*	*50*	*49*
085.	New School for Social Research	17	75	271	.10	8.8	.58	.12
	Psychology	*44*	*51*	*73*	*38*	*21*	*39*	*41*
086.	New York University	38	154	232	.55	8.3	.76	.19
	Psychology	*55*	*67*	*68*	*57*	*27*	*56*	*47*
087.	North Carolina State University-Raleigh	19	44	118	.12	7.8	.76	.15
	Psychology	*45*	*44*	*52*	*39*	*32*	*56*	*43*
088.	North Carolina, University of-Chapel Hill	40	114	122	.77	5.8	.71	.28
	Psychology	*56*	*59*	*53*	*66*	*54*	*52*	*53*
089.	North Carolina, University of-Greensboro	19	40	21	.07	6.2	.74	.19
	*Psychology**	*45*	*43*	*39*	*36*	*50*	*54*	*47*
090.	North Dakota, University of-Grand Forks	15	42	31	.43	5.7	.65	.08
	Psychology	*43*	*44*	*40*	*52*	*55*	*46*	*39*
091.	North Texas State University-Denton	23	45	175	.00	7.8	.58	.15
	*Psychology**	*47*	*45*	*60*	*33*	*33*	*39*	*44*
092.	Northeastern University	16	18	27	.25	6.5	.69	.38
	Psychology	*43*	*39*	*40*	*44*	*47*	*50*	*60*
093.	Northern Illinois University-De Kalb	24	38	100	.07	5.9	.76	.29
	Psychology	*47*	*43*	*50*	*36*	*53*	*57*	*54*
094.	Northwestern University	28	53	53	.54	5.4	.63	.39
	Psychology	*50*	*46*	*43*	*56*	*59*	*44*	*61*
095.	Notre Dame, University of	13	29	69	.23	5.4	.71	.13
	Psychology	*41*	*41*	*45*	*43*	*59*	*52*	*42*
096.	Ohio State University-Columbus	47	271	263	.23	5.6	.68	.22
	Psychology	*60*	*92*	*72*	*43*	*57*	*49*	*49*
097.	Ohio University-Athens	26	65	110	.35	6.5	.83	.10
	Psychology	*49*	*49*	*51*	*48*	*47*	*63*	*40*
098.	Oklahoma State University-Stillwater	23	41	53	.51	5.9	.60	.07
	Psychology	*47*	*44*	*43*	*55*	*53*	*42*	*38*
099.	Oklahoma, University of-Norman	14	23	19	.19	5.1	.48	.19
	Psychology	*42*	*40*	*39*	*41*	*61*	*30*	*47*
100.	Oregon, University of-Eugene	34	65	78	.59	5.4	.76	.35
	Psychology	*53*	*49*	*47*	*58*	*58*	*57*	*58*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 8.1 Program Measures (Raw and Standardized Values) in Psychology

Prog	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
No.	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
081.	1.4	1.2	1.1	0.2	NA	.06	NA	64	.75	.14	.13	.14	.05
	39	41	52	39		42		47	55				
082.	2.1	1.4	0.9	0.5	-0.5	.14	313	37	.62	.10	.10	.09	.05
	46	46	42	44	44	46	44	43	47				
083.	1.8	1.2	1.4	0.4	NA	.31	NA	39	.63	.18	.16	.16	.06
	43	43	62	42		56		43	48				
084.	2.7	1.7	1.2	0.7	-1.0	.20	NA	50	.52	.12	.10	.10	.07
	51	53	54	50	40	50		45	41				
085.	3.1	1.5	0.8	1.0	NA	.18	215	28	.41	.09	.09	.09	.06
	55	49	40	56		48	43	42	35				
086.	3.3	1.9	1.1	1.0	0.5	.34	643	84	.63	.12	.08	.11	.07
	58	57	52	57	54	58	47	51	48				
087.	1.8	NA	NA	0.3	NA	.05	NA	30	.42	.14	NA	NA	.06
	42			41		41		42	35				
088.	3.7	2.2	1.1	1.2	1.0	.28	369	113	.73	.10	.06	.08	.07
	62	61	51	62	59	54	44	55	54				
089.	2.1	1.6	1.5	0.4	NA	.05	NA	60	.84	.18	.15	.12	.06
	45	49	67	42		41		47	61				
090.	1.2	1.1	NA	0.2	NA	.13	NA	21	.67	.16	.17	NA	.05
	36	41		38		46		40	50				
091.	1.2	0.8	1.3	0.2	NA	.00	NA	58	.65	.19	.17	.21	.05
	37	34	58	39		38		46	49				
092.	2.4	1.5	1.2	0.6	NA	.63	473	31	.63	.13	.16	.11	.08
	48	47	55	49		74	45	42	48				
093.	1.8	1.3	1.1	0.4	NA	.04	NA	46	.58	.13	.11	.11	.06
	43	44	49	43		40		44	45				
094.	3.6	2.2	0.6	1.2	0.3	.36	596	140	.75	.10	.06	.10	.08
	61	62	31	61	52	59	46	59	55				
095.	1.5	1.1	1.0	0.3	-1.3	.15	NA	62	.85	.11	.09	.12	.05
	40	40	47	41	36	47		47	61				
096.	3.4	2.0	0.8	1.2	0.9	.13	469	159	.89	.09	.08	.09	.06
	59	59	37	61	58	45	45	62	64				
097.	2.0	1.3	1.0	0.4	NA	.04	NA	57	.65	.12	.10	.15	.05
	44	44	47	42		40		46	50				
098.	1.5	1.0	NA	0.2	-1.9	.04	NA	24	.57	.16	.22	NA	.04
	39	38		38	30	41		41	44				
099.	1.8	1.4	1.0	0.4	-0.6	.29	358	25	.86	.14	.11	.14	.06
	42	46	44	42	44	55	44	41	62				
100.	3.9	2.3	1.3	1.3	-0.9	.38	870	83	.68	.09	.06	.09	.07
	63	64	57	65	40	60	49	50	51				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 8.1 Program Measures (Raw and Standardized Values) in Psychology

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
101.	Pennsylvania State University	32	69	97	.65	6.3	.77	.32
	Psychology	*52*	*50*	*49*	*61*	*49*	*58*	*56*
102.	Pennsylvania, University of	40	46	52	.73	4.9	.88	.55
	Psychology	*56*	*45*	*43*	*64*	*64*	*68*	*73*
103.	Pittsburgh, University of	44	65	114	.53	6.2	.77	.42
	Psychology	*58*	*49*	*52*	*56*	*50*	*58*	*63*
104.	Princeton University	21	38	40	.28	4.6	.87	.53
	Psychology	*46*	*43*	*41*	*45*	*68*	*67*	*71*
105.	Purdue University-West Lafayette	63	153	164	.36	5.7	.69	.28
	Psychological Sciences	*69*	*67*	*59*	*49*	*55*	*50*	*54*
106.	Rhode Island, University of	21	43	104	.16	7.5	.64	.16
	Psychology	*46*	*44*	*50*	*40*	*36*	*45*	*44*
107.	Rice University	9	6	27	NA	NA	NA	NA
	*Psychology**	*39*	*36*	*40*				
108.	Rochester, University of	28	90	85	.70	6.3	.83	.45
	Psychology	*50*	*54*	*48*	*63*	*48*	*63*	*66*
109.	Rosemead Graduate School of Prof Psychology	14	52	20	.00	6.0	.97	.06
	*School of Professional Psychology**	*42*	*46*	*39*	*33*	*52*	*77*	*37*
110.	Rutgers, The State University-New Brunswick	87	120	150	.31	6.2	.72	.31
	Psychology	*82*	*60*	*57*	*46*	*49*	*53*	*55*
111.	Rutgers, The State University-Newark	12	32	60	.50	6.2	.74	.32
	Psychology	*41*	*42*	*44*	*55*	*50*	*54*	*56*
112.	SUNY at Albany	22	52	77	.10	5.2	.64	.08
	Psychology	*46*	*46*	*47*	*38*	*61*	*45*	*39*
113.	SUNY at Binghamton	19	31	79	.26	5.5	.74	.19
	Psychology	*45*	*42*	*47*	*44*	*57*	*55*	*46*
114.	SUNY at Buffalo	40	103	136	.38	6.5	.72	.16
	Psychology	*56*	*57*	*55*	*50*	*47*	*53*	*44*
115.	SUNY at Stony Brook	41	133	239	.21	5.3	.73	.37
	Psychology	*57*	*63*	*69*	*42*	*60*	*53*	*60*
116.	Saint Louis University	20	80	138	.46	6.4	.74	.18
	Psychology	*45*	*52*	*55*	*53*	*48*	*54*	*46*
117.	South Carolina, University of-Columbia	33	86	144	.47	5.9	.68	.17
	Psychology	*52*	*53*	*56*	*54*	*53*	*49*	*45*
118.	South Dakota, University of-Vermillion	12	50	39	.45	4.4	.51	.10
	Psychology	*41*	*46*	*41*	*53*	*69*	*33*	*40*
119.	South Florida, University of-Tampa	32	41	139	.13	6.0	.67	.21
	*Psychology**	*52*	*44*	*55*	*39*	*52*	*48*	*48*
120.	Southern California, University of	33	68	114	.46	6.4	.63	.26
	Psychology	*52*	*49*	*52*	*53*	*48*	*44*	*52*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 8.1 Program Measures (Raw and Standardized Values) in Psychology

Prog No.	Survey Results (08)	Survey Results (09)	Survey Results (10)	Survey Results (11)	University Library (12)	Research Support (13)	Research Support (14)	Published Articles (17)	Published Articles (18)	Survey Ratings Standard Error (08)	Survey Ratings Standard Error (09)	Survey Ratings Standard Error (10)	Survey Ratings Standard Error (11)
101.	3.6	2.1	1.1	1.1	0.7	.16	NA	122	.75	.08	.06	.09	.06
	61	*61*	*50*	*59*	*56*	*47*		*57*	*55*				
102.	4.4	2.5	1.1	1.5	0.7	.50	966	147	.70	.07	.06	.08	.06
	69	*69*	*49*	*70*	*56*	*67*	*50*	*61*	*52*				
103.	3.4	2.0	1.6	1.1	0.1	.34	525	158	.80	.09	.07	.08	.07
	58	*58*	*69*	*60*	*50*	*58*	*46*	*62*	*58*				
104.	3.8	2.2	1.1	1.2	0.9	.48	1072	92	.91	.10	.07	.11	.08
	63	*62*	*51*	*61*	*58*	*66*	*51*	*52*	*65*				
105.	3.5	2.0	1.4	1.2	-0.5	.21	600	199	.84	.09	.07	.09	.07
	59	*57*	*61*	*63*	*44*	*50*	*46*	*69*	*61*				
106.	1.8	1.2	0.9	0.4	NA	.05	NA	25	.57	.13	.12	.13	.05
	42	*42*	*40*	*42*		*41*		*41*	*45*				
107.	1.4	0.9	NA	0.2	-1.4	NA	NA	23	NA	.21	.15	NA	.05
	38	*36*		*38*	*35*			*41*					
108.	3.2	2.0	0.9	0.9	-0.6	.36	943	117	.61	.10	.07	.09	.07
	56	*58*	*41*	*56*	*43*	*59*	*49*	*56*	*47*				
109.	0.8	NA	NA	0.1	NA	.00	NA	14	.43	.19	NA	NA	.03
	33			*35*		*38*		*39*	*36*				
110.	3.5	2.0	1.4	1.2	0.8	.22	NA	235	.64	.09	.06	.10	.08
	60	*58*	*62*	*63*	*57*	*51*		*75*	*49*				
111.	2.3	1.6	0.7	0.6	NA	.25	NA	17	.58	.14	.12	.13	.07
	48	*50*	*35*	*47*		*53*		*40*	*45*				
112.	2.7	1.8	1.5	0.8	-1.0	.27	NA	114	.86	.11	.08	.14	.08
	51	*54*	*69*	*51*	*40*	*54*		*55*	*62*				
113.	2.6	1.5	1.5	0.8	NA	.42	406	92	.79	.13	.11	.10	.08
	51	*49*	*67*	*51*		*63*	*44*	*52*	*58*				
114.	3.1	1.9	1.2	1.0	0.3	.15	215	123	.80	.09	.04	.08	.07
	56	*56*	*55*	*56*	*52*	*47*	*43*	*57*	*58*				
115.	3.7	2.2	1.1	1.3	-0.6	.27	618	131	.68	.09	.06	.09	.07
	61	*62*	*50*	*63*	*43*	*54*	*46*	*58*	*51*				
116.	1.6	0.9	0.8	0.2	NA	.10	NA	19	.40	.16	.15	.14	.05
	40	*35*	*36*	*39*		*44*		*40*	*34*				
117.	2.0	1.3	1.3	0.4	-0.4	.12	255	111	.64	.13	.12	.14	.06
	44	*43*	*57*	*42*	*46*	*45*	*43*	*55*	*48*				
118.	1.4	1.1	NA	0.2	NA	.08	NA	6	.42	.11	.14	NA	.04
	38	*41*		*38*		*43*		*38*	*35*				
119.	2.6	1.5	1.4	0.8	NA	.06	326	64	.56	.10	.08	.09	.07
	51	*49*	*62*	*51*		*42*	*44*	*47*	*44*				
120.	3.3	1.9	1.3	1.0	0.4	.27	454	124	.79	.10	.07	.08	.07
	58	*57*	*60*	*57*	*53*	*54*	*45*	*57*	*58*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 8.1 Program Measures (Raw and Standardized Values) in Psychology

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
121.	Southern Illinois University-Carbondale	37	83	104	.46	6.2	.80	.32
	Psychology	*55*	*53*	*50*	*53*	*50*	*60*	*56*
122.	Southern Mississippi, Univ of-Hattiesburg	17	99	88	.03	5.5	.52	.03
	Psychology	*44*	*56*	*48*	*35*	*57*	*33*	*35*
123.	Stanford University	26	81	68	.70	5.1	.83	.58
	Psychology	*49*	*52*	*45*	*63*	*62*	*63*	*75*
124.	Syracuse University	29	92	136	.54	5.8	.61	.19
	Psychology	*50*	*54*	*55*	*56*	*54*	*42*	*47*
125.	Temple University	40	81	150	.42	7.4	.70	.07
	Psychology	*56*	*52*	*57*	*51*	*37*	*51*	*38*
126.	Tennessee, University of-Knoxville	27	125	166	.32	6.0	.63	.07
	Psychology	*49*	*61*	*59*	*47*	*52*	*44*	*38*
127.	Texas Christian University	15	32	36	.07	5.8	.71	.32
	Psychology	*43*	*42*	*41*	*36*	*55*	*52*	*56*
128.	Texas Tech University-Lubbock	19	87	137	.15	6.5	.65	.10
	Psychology	*45*	*53*	*55*	*40*	*47*	*46*	*40*
129.	Texas Woman's University-Denton	12	21	55	.00	6.9	.56	.11
	*Psychology**	*41*	*40*	*44*	*33*	*42*	*37*	*41*
130.	Texas, University of-Austin	46	110	151	.56	5.3	.65	.31
	Psychology	*59*	*58*	*57*	*61*	*60*	*46*	*55*
131.	Toledo, University of	17	26	57	.09	6.9	.62	.05
	Psychology	*44*	*41*	*44*	*37*	*43*	*43*	*36*
132.	Tulane University	17	38	48	.29	6.0	.42	.29
	Psychology	*44*	*43*	*43*	*46*	*52*	*24*	*54*
133.	Utah State University-Logan	20	59	58	.12	6.7	.60	.07
	Psychology	*45*	*47*	*44*	*39*	*45*	*42*	*38*
134.	Utah, University of-Salt Lake City	29	71	100	.74	6.8	.70	.34
	Psychology	*50*	*50*	*50*	*65*	*43*	*51*	*58*
135.	Vanderbilt University	30	64	70	.77	5.0	.73	.36
	Psychology	*51*	*49*	*46*	*66*	*63*	*54*	*59*
136.	Vermont, University of	15	42	73	.40	5.4	.72	.22
	Psychology	*43*	*44*	*46*	*51*	*58*	*52*	*49*
137.	Virginia Commonwealth University/Medical Col	29	73	118	.06	6.0	.63	.13
	*Psychology**	*50*	*50*	*52*	*36*	*52*	*44*	*42*
138.	Virginia Polytechnic Institute & State Univ	27	20	95	.00	5.8	.53	.00
	*Psychology**	*49*	*39*	*49*	*33*	*55*	*35*	*33*
139.	Virginia, University of	35	37	60	.16	5.4	.62	.35
	Psychology	*53*	*43*	*44*	*40*	*59*	*43*	*58*
140.	Washington State University-Pullman	21	60	66	.59	5.5	.71	.21
	Psychology	*46*	*48*	*45*	*58*	*58*	*52*	*48*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 8.1 Program Measures (Raw and Standardized Values) in Psychology

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
121.	2.4	1.6	0.7	0.7	-0.2	.11	NA	97	.62	.10	.10	.11	.07
	49	*51*	*36*	*51*	*48*	*44*		*53*	*48*				
122.	0.7	NA	NA	0.1	NA	.06	NA	33	.53	.17	NA	NA	.04
	32			*37*		*41*		*42*	*42*				
123.	4.8	2.6	1.0	1.8	2.0	.58	1731	155	1.00	.06	.07	.07	.05
	72	*71*	*46*	*75*	*70*	*72*	*57*	*62*	*71*				
124.	2.6	1.5	0.8	0.6	-0.3	.07	222	73	.72	.11	.10	.10	.06
	50	*49*	*39*	*49*	*46*	*42*	*42*	*49*	*54*				
125.	2.6	1.6	1.1	0.8	-0.4	.10	NA	70	.68	.11	.09	.06	.07
	51	*50*	*50*	*53*	*45*	*44*		*48*	*51*				
126.	2.3	1.5	0.8	0.7	-0.4	.15	485	58	.67	.09	.08	.11	.06
	48	*49*	*40*	*50*	*45*	*47*	*45*	*46*	*50*				
127.	1.9	NA	NA	0.3	NA	.13	1981	64	.80	.14	NA	NA	.05
	44			*40*		*46*	*59*	*47*	*58*				
128.	1.4	0.9	1.2	0.2	NA	.05	NA	72	.79	.15	.13	.14	.05
	39	*36*	*54*	*38*		*41*		*49*	*58*				
129.	0.4	NA	NA	0.1	NA	.00	NA	8	.33	.12	NA	NA	.04
	29			*36*		*38*		*38*	*30*				
130.	3.8	2.1	1.0	1.4	1.6	.44	1262	196	.87	.08	.06	.09	.07
	63	*61*	*45*	*65*	*65*	*63*	*52*	*68*	*63*				
131.	1.2	NA	NA	0.2	NA	.06	NA	15	.59	.12	NA	NA	.05
	36			*38*		*41*		*39*	*46*				
132.	1.9	1.2	0.8	0.5	-1.0	.06	195	38	.71	.14	.12	.10	.07
	43	*43*	*38*	*45*	*39*	*41*	*42*	*43*	*53*				
133.	1.4	1.0	1.1	0.2	NA	.00	186	44	.50	.14	.11	.13	.05
	38	*37*	*52*	*38*		*38*	*42*	*44*	*40*				
134.	2.9	1.9	1.4	0.8	-0.6	.17	NA	85	.76	.10	.07	.09	.07
	54	*55*	*65*	*53*	*43*	*48*		*51*	*56*				
135.	3.1	2.0	1.3	0.9	-0.7	30	391	95	.70	.09	.07	.09	.07
	56	*58*	*59*	*56*	*42*	*56*	*44*	*52*	*52*				
136.	2.3	1.5	1.2	0.5	NA	.20	NA	27	.73	.15	.11	.09	.06
	48	*48*	*54*	*46*		*50*		*41*	*54*				
137.	2.0	1.2	1.4	0.3	NA	.07	NA	70	.62	.14	.14	.17	.05
	44	*42*	*61*	*41*		*42*		*48*	*48*				
138.	2.3	1.3	1.6	0.5	-0.0	.07	NA	56	.59	.16	.13	.11	.06
	47	*44*	*69*	*44*	*49*	*42*		*46*	*46*				
139.	3.4	1.9	1.6	1.2	0.7	.29	215	79	.57	.09	.07	.07	.07
	58	*57*	*71*	*62*	*57*	*55*	*43*	*50*	*45*				
140.	2.2	1.4	1.1	0.5	-0.3	.10	NA	41	.48	.10	.12	.13	.07
	46	*47*	*50*	*45*	*47*	*44*		*44*	*39*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 8.1 Program Measures (Raw and Standardized Values) in Psychology

Prog No.	University - Department/Academic Unit	Program Size (01)	(02)	(03)	Characteristics of Program Graduates (04)	(05)	(06)	(07)
141.	Washington University-Saint Louis	26	70	96	.68	5.8	.79	.37
	Psychology	*49*	*50*	*49*	*63*	*55*	*59*	*60*
142.	Washington, University of-Seattle	61	106	50	.49	6.0	.64	.32
	Psychology	*68*	*57*	*43*	*54*	*52*	*45*	*56*
143.	Wayne State University	40	118	103	.42	7.0	.71	.19
	Psychology	*56*	*60*	*50*	*51*	*41*	*51*	*47*
144.	West Virginia University	26	54	97	.38	5.2	.73	.14
	Psychology	*49*	*46*	*49*	*50*	*61*	*54*	*43*
145.	Western Michigan University	20	24	39	NA	NA	NA	NA
	*Psychology**	*45*	*40*	*41*				
146.	Wisconsin, University of-Madison	36	59	85	.57	5.7	.83	.42
	Psychology	*54*	*47*	*48*	*58*	*55*	*63*	*64*
147.	Wisconsin, University of-Milwaukee	18	23	48	.24	6.2	.62	.24
	Psychology	*44*	*40*	*43*	*44*	*50*	*43*	*50*
148.	Wyoming, University of	14	39	26	.51	6.4	.50	.08
	Psychology	*42*	*43*	*40*	*55*	*48*	*32*	*38*
149.	Yale University	49	88	91	.67	5.6	.57	.37
	Psychology	*61*	*54*	*48*	*62*	*56*	*38*	*60*
150.	Yeshiva University	16	96	332	.39	9.3	.64	.17
	Psychology	*43*	*55*	*82*	*50*	*17*	*45*	*45*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 8.1 Program Measures (Raw and Standardized Values) in Psychology

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
141.	2.8	1.7	1.0	0.8	-0.4	.27	604	84	.73	.09	.09	.10	.07
	53	52	47	53	45	54	46	51	54				
142.	3.9	2.2	1.4	1.3	1.5	.38	1381	280	.77	.07	.05	.07	.06
	63	62	62	64	64	60	54	82	57				
143.	2.3	1.5	1.0	0.6	-0.4	.20	206	78	.63	.12	.11	.11	.07
	48	47	47	47	46	50	43	50	48				
144.	2.3	1.4	1.2	0.5	NA	.04	NA	71	.73	.13	.12	.15	.07
	47	47	54	45		40		48	54				
145.	1.9	1.3	0.8	0.4	NA	.00	NA	25	.45	.17	.15	.13	.06
	44	44	39	43		38		41	37				
146.	3.9	2.2	0.8	1.4	1.6	.67	5435	172	.83	.09	.08	.09	.07
	64	63	36	66	65	77	91	65	61				
147.	2.0	1.2	1.2	0.4	NA	.06	NA	41	.72	.16	.14	.10	.06
	44	43	56	43		41		44	54				
148.	1.1	0.9	1.2	0.2	NA	.14	NA	20	.50	.14	.14	.14	.04
	35	36	53	39		46		40	40				
149.	4.5	2.5	1.1	1.5	2.1	.49	1658	275	.82	.08	.06	.08	.06
	70	69	50	69	70	67	56	81	59				
150.	1.6	1.0	0.8	0.3	NA	.00	NA	12	.31	.13	.12	.11	.05
	40	38	36	41		38		39	29				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 8.2 Summary Statistics Describing Each Program Measure--Psychology

Measure	Number of Programs Evaluated	Mean	Standard Deviation	DECILES 1	2	3	4	5	6	7	8	9
Program Size												
01 Raw Value	150	29	18	14	16	19	21	24	29	32	38	44
Std Value	150	50	10	42	43	45	46	47	50	52	55	58
02 Raw Value	149	71	48	25	35	42	49	59	67	80	103	125
Std Value	149	50	10	40	42	44	45	47	49	52	57	61
03 Raw Value	149	102	73	30	43	57	69	85	102	123	149	189
Std Value	149	50	10	40	42	44	45	48	50	53	56	62
Program Graduates												
04 Raw Value	147	.39	.24	.06	.14	.23	.30	.41	.46	.53	.62	.68
Std Value	147	50	10	36	40	43	46	51	53	56	60	62
05 Raw Value	147	6.2	.9	7.4	6.9	6.4	6.2	6.0	5.9	5.7	5.4	5.3
Std Value	147	50	10	37	42	48	50	52	53	55	58	59
06 Raw Value	147	.69	.11	.55	.60	.63	.67	.70	.72	.74	.77	.83
Std Value	147	50	10	37	42	45	48	51	53	55	57	63
07 Raw Value	147	.24	.14	.07	.11	.15	.19	.21	.24	.30	.35	.41
Std Value	147	50	10	38	41	44	46	48	50	54	58	62
Survey Results												
08 Raw Value	150	2.5	1.0	1.2	1.7	1.9	2.2	2.4	2.7	3.1	3.5	3.9
Std Value	150	50	10	37	42	44	47	49	52	56	60	64
09 Raw Value	142	1.6	.5	.9	1.2	1.3	1.5	1.5	1.7	1.9	2.1	2.2
Std Value	142	50	10	36	42	44	48	48	52	56	60	62
10 Raw Value	131	1.1	.2	.8	.8	.9	1.0	1.1	1.1	1.2	1.3	1.4
Std Value	131	50	10	38	38	43	47	51	51	55	59	63
11 Raw Value	150	.7	.4	.2	.3	.4	.5	.6	.8	.9	1.1	1.3
Std Value	150	50	10	38	40	43	45	48	52	55	60	64
University Library												
12 Raw Value	86	.1	1.0	-1.1	-.7	-.5	-.4	-.2	.1	.5	.9	1.6
Std Value	86	50	10	38	42	44	45	47	50	54	58	65
Research Support												
13 Raw Value	146	.21	.17	.00	.05	.08	.13	.16	.20	.27	.34	.46
Std Value	146	50	10	38	41	42	45	47	49	54	58	65
14 Raw Value	79	1003	1075	215	255	363	456	564	697	950	1659	2198
Std Value	79	50	10	43	43	44	45	46	47	50	56	61
Publication Records												
17 Raw Value	150	81	63	17	27	39	57	66	79	92	122	165
Std Value	150	50	10	40	41	43	46	48	50	52	57	63
18 Raw Value	146	.66	.16	.42	.52	.60	.65	.70	.73	.76	.80	.84
Std Value	146	50	10	35	41	46	49	53	54	56	59	61

NOTE: Standardized values reported in the preceding table have been computed from exact values of the mean and standard deviation and not the rounded values reported here.

TABLE 8.3 Intercorrelations Among Program Measures on 150 Programs in Psychology

	Measure														
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	17	18
Program Size																
01		.65	.64	.22	-.10	.02	.20	.57	.51	.08	.58	.47	.16	.32	.76	.16
02			.81	.10	-.15	-.06	-.06	.31	.23	-.04	.39	.36	-.04	.24	.49	-.01
03				-.05	-.43	-.11	-.17	.20	.08	-.01	.25	.24	-.17	.11	.34	-.17
Program Graduates																
04					.10	.17	.60	.64	.63	-.15	.58	.24	.56	.29	.35	.35
05						.15	.32	.13	.20	.05	.12	-.07	.27	.05	.12	.26
06							.44	.24	.33	.05	.21	.14	.31	.26	.09	.11
07								.74	.73	-.12	.67	.40	.79	.31	.43	.46
Survey Results																
08									.97	.05	.97	.73	.75	.49	.74	.57
09										.03	.93	.67	.73	.53	.71	.59
10											.05	-.03	-.02	-.03	.15	.14
11												.73	.71	.47	.77	.54
University Library																
12													.46	.45	.63	.37
Research Support																
13														.28	.42	.51
14															.53	.29
Publication Records																
17																.54
18																

NOTE: Since in computing correlation coefficients program data must be available for both of the measures being correlated, the actual number of programs on which each coefficient is based varies.

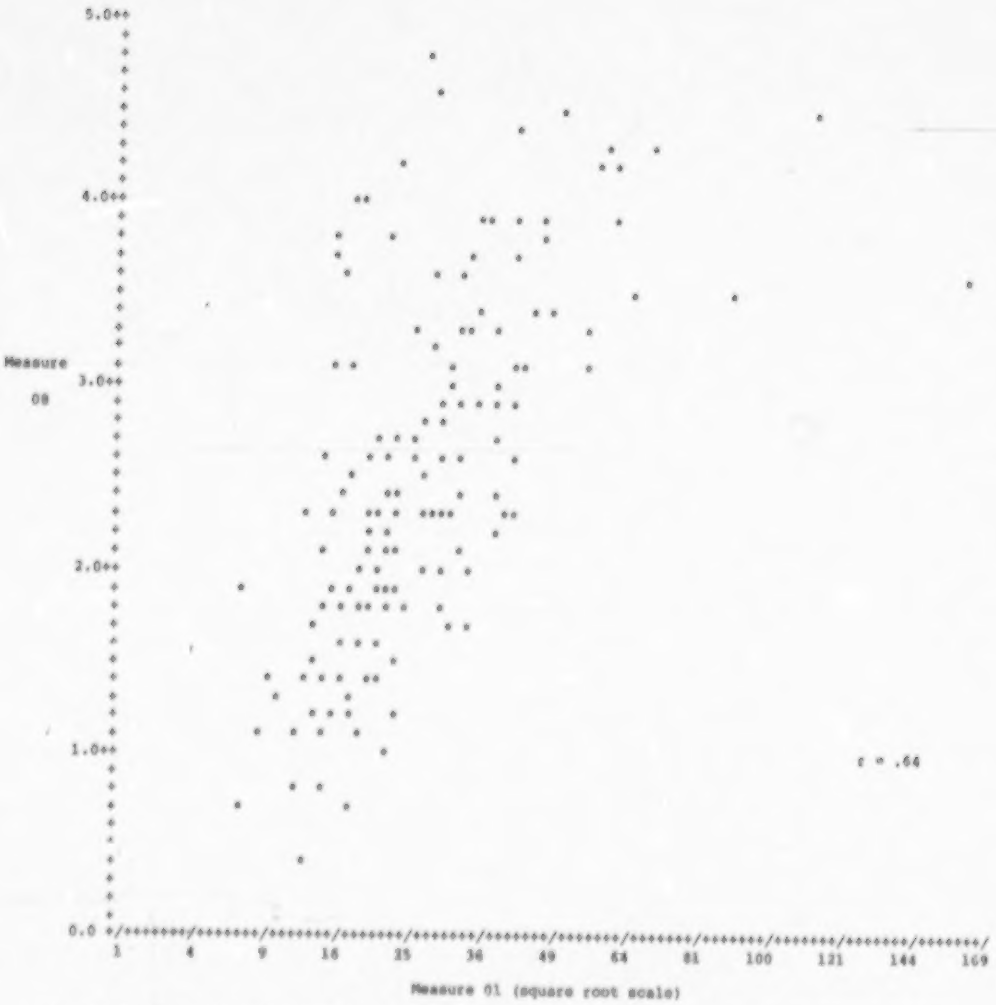


FIGURE 8.1 Mean rating of scholarly quality of faculty (measure 08) versus number of faculty members (measure 01)--150 programs in psychology.

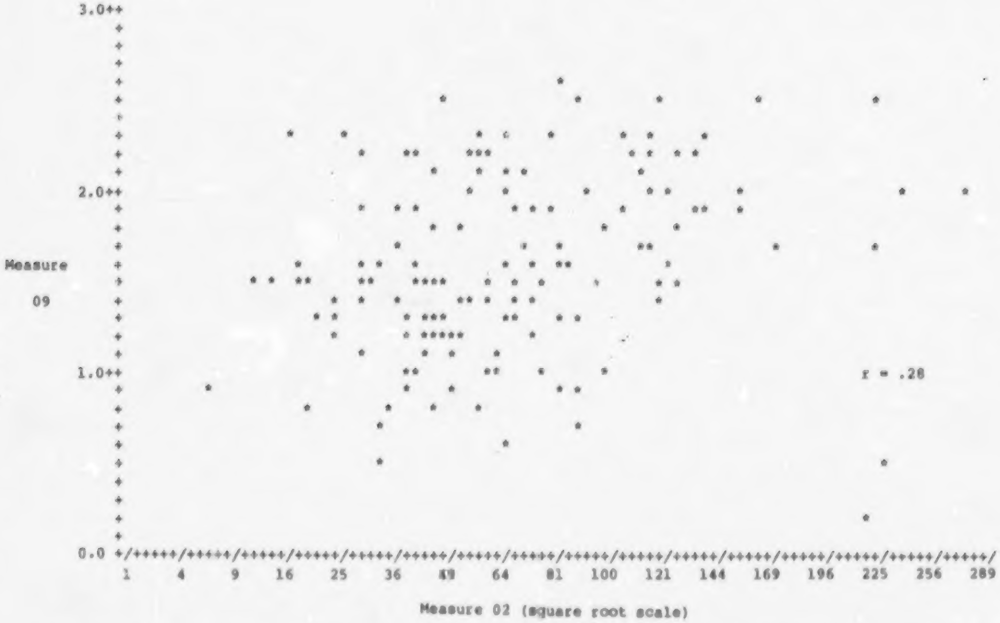


FIGURE 8.2 Mean rating of program effectiveness in educating research scholars/scientists (measure 09) versus number of graduates in last five years (measure 02)--141 programs in psychology.

TABLE 8.4 Characteristics of Survey Participants in Psychology

	Respondents	
	N	%
Field of Specialization		
Clinical Psychology	57	20
Developmental/Gerontological Psych.	20	7
Experimental Psychology	73	26
Industrial/Personnel Psychology	12	4
Physiological Psychology	25	9
Social Psychology	41	15
Other/Unknown	52	19
Faculty Rank		
Professor	143	51
Associate Professor	95	34
Assistant Professor	40	14
Other/Unknown	2	1
Year of Highest Degree		
Pre-1950	17	6
1950-59	61	22
1960-69	83	30
Post-1969	109	39
Unknown	10	4
Evaluator Selection		
Nominated by Institution	253	90
Other	27	10
Survey Form		
With Faculty Names	251	89
Without Names	29	10
Total Evaluators	280	100

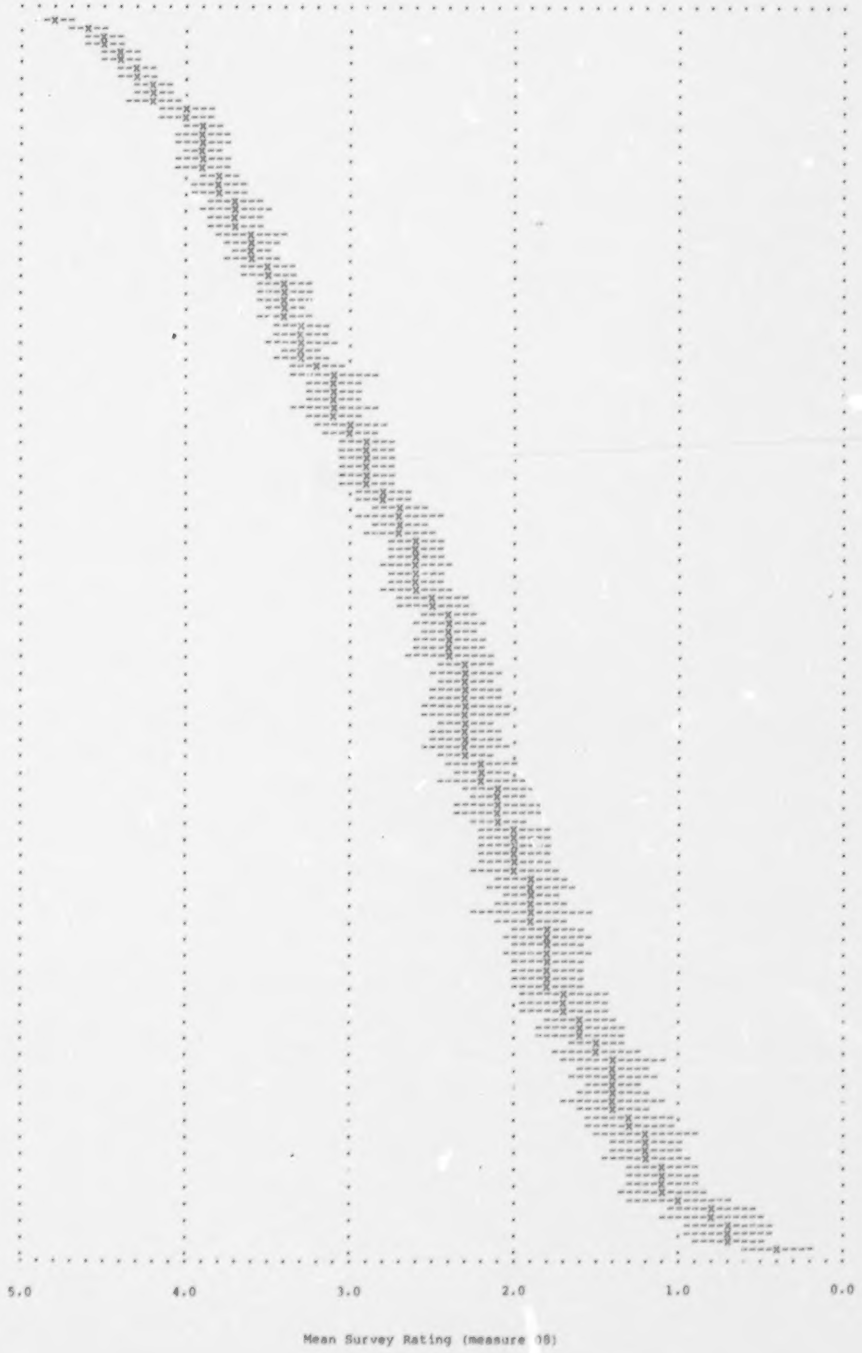


FIGURE 8.3 Mean rating of scholarly quality of faculty in 150 programs in psychology.

NOTE: Programs are listed in sequence of mean rating, with the highest-rated program appearing at the top of the page. The broken lines (---) indicate a confidence interval of ±1.5 standard errors around the reported mean (x) of each program.

IX
Sociology Programs

In this chapter 92 research-doctorate programs in sociology are assessed. These programs, according to the information supplied by their universities, have accounted for 3,061 doctoral degrees awarded during the FY1976-80 period--approximately 93 percent of the aggregate number of sociology doctorates earned from U.S. universities in this five-year span.[1] On the average, 49 full-time and part-time students intending to earn doctorates were enrolled in a program in December 1980, with an average faculty size of 21 members.[2] Thirteen programs were initiated since 1970, and no two programs are located in the same university. In addition to the 92 institutions represented in this discipline, another 3 were initially identified as meeting the criteria[3] for inclusion in the assessment:

University of California--San Francisco
Tufts University
U.S. International University

The U.S. International University chose not to participate in the assessment in any discipline. Sociology programs at the other two institutions have not been included in the evaluations in this discipline, since in each case the study coordinator either indicated that the institution did not at that time have a research-doctorate program in sociology or failed to provide the information requested by the committee.

Before examining individual program results presented in Table 9.1, the reader is urged to refer to Chapter II, in which each of the 16 measures used in the assessment is discussed. Summary statistics describing every measure are given in Table 9.2. For 14 of the measures, data are reported for at least 82 of the 92 sociology programs. For measure 12, a composite index of the size of a university library, data are available for 73 programs; for measure 14, the total university expenditures for research in this discipline, data are available for 66 programs. The programs not evaluated on measures 12 and 14 are typically smaller--in terms of faculty size and graduate student enrollment--than other sociology programs. Were data on these two measures available for all 92 programs, it is likely that their reported means would be appreciably lower (and that some of the correlations of these measures with others would be higher).

---

[1] Data from the NRC's Survey of Earned Doctorates indicate that 3,303 research doctorates in sociology were awarded by U.S. universities between FY1976 and FY1980.

[2] See the reported means for measures 03 and 01 in Table 9.2.

[3] As mentioned in Chapter I, the primary criterion for inclusion was that a university had awarded at least 9 doctorates in sociology during the FY1976-78 period.

Intercorrelations among the 16 measures (Pearson product-moment coefficients) are given in Table 9.3. Of particular note are the high positive correlations of the reputational survey ratings (08 and 09) with the measures of program size (01, 02, and 03), university library size (12), and the total number of recently published articles by program faculty (17). Figure 9.1 illustrates the relation between the mean rating of the scholarly quality of faculty (measure 08) and the number of faculty members (measure 01) for each of 92 programs in sociology. Figure 9.2 plots the mean rating of program effectiveness (measure 09) against the total number of FY1976-80 program graduates (measure 02). Although in both figures there is a significant positive correlation between program size and reputational rating, it is quite apparent that some of the smaller programs received high mean ratings and that some of the larger programs received low mean ratings.

Table 9.4 describes the 181 faculty members who participated in the evaluation of sociology programs. These individuals constituted 66 percent of those asked to respond to the survey in this discipline and 9 percent of the faculty population in the 92 research-doctorate programs being evaluated.[*] A majority of the survey participants had earned their highest degree prior to 1970, and almost half held the rank of full professor. One exception should be noted with regard to the survey evaluations in this discipline. It has been called to the attention of the committee that the faculty list (used in the survey) for the Department of Sociology at the University of Texas (Austin) was missing the names of five members. The committee has decided to report the survey results for this program, but with the caution that the reputational ratings may have been influenced by the omission of these names.

To assist the reader in interpreting results of the survey evaluations, estimated standard errors have been computed for mean ratings of the scholarly quality of faculty in 92 sociology programs (and are given in Table 9.1). For each program the mean rating and an associated "confidence interval" of 1.5 standard errors are illustrated in Figure 9.3 (listed in order of highest to lowest mean rating). In comparing two programs, if their confidence intervals do not overlap, one may conclude that there is a significant difference in their mean ratings at a .05 level of significance.[5] From this figure it is also apparent that one should have somewhat more confidence in the accuracy of the mean ratings of higher-rated programs than lower-rated programs. This generalization results primarily from the fact that evaluators are not as likely to be familiar with the less prestigious programs, and consequently the mean ratings of these programs are usually based on fewer survey responses.

---

[*] See Table 2.3 in Chapter II.

---

[5] See pp. 30-32 for a discussion of the interpretation of mean ratings and associated confidence intervals.

TABLE 9.1 Program Measures (Raw and Standardized Values) in Sociology

Prog No.	University - Department/Academic Unit	Program Size (01)	(02)	(03)	Characteristics of Program Graduates (04)	(05)	(06)	(07)
001.	Akron, University of	16	8	54	NA	NA	NA	NA
	*Sociology**	*44*	*38*	*52*				
002.	American University	12	16	91	.09	15.0	.64	.18
	Sociology	*39*	*42*	*63*	*36*	*5*	*39*	*40*
003.	Arizona, University of-Tucson	26	25	26	.53	8.3	.67	.53
	Sociology	*56*	*46*	*43*	*57*	*49*	*42*	*63*
004.	Boston University	29	32	118	.51	9.1	.65	.21
	*Sociology**	*60*	*49*	*71*	*56*	*44*	*40*	*41*
005.	Bowling Green State University	17	21	20	.25	6.0	.53	.16
	*Sociology**	*45*	*44*	*41*	*44*	*64*	*28*	*38*
006.	Brandeis University	13	41	22	.54	9.9	.63	.27
	Sociology	*40*	*54*	*42*	*58*	*39*	*38*	*46*
007.	Brigham Young University	17	10	34	NA	NA	NA	NA
	Sociology (Family Studies Program)	*45*	*39*	*45*				
008.	Brown University	21	47	85	.63	7.7	.79	.29
	Sociology	*50*	*57*	*61*	*62*	*53*	*53*	*47*
009.	CUNY-Graduate School	34	63	145	.21	9.1	.62	.22
	Sociology	*66*	*64*	*79*	*42*	*44*	*37*	*42*
010.	California, University of-Berkeley	26	83	109	.55	8.6	.77	.39
	Sociology	*56*	*74*	*68*	*58*	*47*	*52*	*54*
011.	California, University of-Davis	16	17	17	.18	7.9	.69	.19
	Sociology	*44*	*42*	*40*	*40*	*52*	*44*	*40*
012.	California, University of-Los Angeles	41	50	99	.29	8.3	.68	.36
	Sociology	*75*	*58*	*65*	*46*	*49*	*43*	*52*
013.	California, University of-Riverside	13	30	36	.14	7.5	.64	.21
	Sociology	*40*	*48*	*46*	*39*	*55*	*39*	*42*
014.	California, University of-San Diego	20	16	57	.60	6.5	.90	.60
	*Sociology**	*49*	*42*	*52*	*61*	*61*	*64*	*68*
015.	California, University of-Santa Barbara	21	44	42	.24	7.4	.79	.36
	Sociology	*50*	*55*	*48*	*43*	*55*	*53*	*52*
016.	Case Western Reserve University	9	18	11	.58	11.0	.79	.53
	Sociology	*35*	*43*	*38*	*60*	*31*	*53*	*63*
017.	Catholic University of America	9	15	24	NA	NA	1.00	.10
	Sociology	*35*	*41*	*42*			*74*	*34*
018.	Chicago, University of	22	109	97	.56	6.6	.87	.44
	Sociology	*51*	*87*	*65*	*59*	*61*	*61*	*57*
019.	Colorado, University of	22	50	60	.33	8.3	.63	.23
	Sociology	*51*	*58*	*53*	*48*	*49*	*38*	*43*
020.	Columbia University	23	56	128	.45	10.4	.72	.29
	Sociology	*53*	*61*	*74*	*53*	*36*	*47*	*47*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 9.1 Program Measures (Raw and Standardized Values) in Sociology

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
001.	1.6	1.1	1.3	0.6	NA	.00	NA	39	.81	.10	.09	.09	.06
	41	*42*	*60*	*42*		*40*		*46*	*60*				
002.	1.3	0.8	0.9	0.5	NA	.08	56	5	.33	.12	.11	.07	.06
	38	*37*	*44*	*39*		*47*	*45*	*35*	*28*				
003.	4.1	2.1	1.9	1.6	0.9	.23	208	82	.89	.08	.06	.04	.05
	65	*61*	*78*	*65*	*57*	*59*	*46*	*60*	*65*				
004.	2.7	1.7	1.3	1.0	-0.4	.21	187	58	.59	.09	.07	.10	.07
	52	*54*	*58*	*51*	*44*	*57*	*46*	*52*	*45*				
005.	1.4	1.0	1.0	0.5	NA	.00	NA	64	.88	.13	.13	.07	.06
	40	*41*	*50*	*39*		*40*		*54*	*65*				
006.	2.7	1.5	0.6	0.9	NA	.08	6	14	.39	.10	.10	.07	.07
	52	*50*	*37*	*49*		*46*	*45*	*38*	*31*				
007.	1.8	1.3	1.2	0.4	-0.6	.00	NA	36	.53	.13	.14	.11	.06
	43	*47*	*56*	*38*	*42*	*40*		*45*	*41*				
008.	2.8	1.8	1.0	1.0	-1.1	.19	300	45	.71	.11	.08	.07	.07
	53	*56*	*49*	*50*	*38*	*56*	*47*	*48*	*53*				
009.	3.3	1.8	1.0	1.2	NA	.06	232	56	.47	.09	.09	.08	.07
	57	*55*	*47*	*56*		*45*	*47*	*51*	*37*				
010.	4.5	2.3	0.7	1.7	2.2	.31	216	90	.81	.06	.07	.07	.05
	69	*65*	*40*	*67*	*70*	*66*	*46*	*62*	*60*				
011.	2.7	1.5	1.0	1.1	0.6	.13	52	43	.75	.10	.11	.10	.07
	52	*50*	*47*	*52*	*54*	*51*	*45*	*47*	*56*				
012.	4.1	2.2	1.5	1.6	2.0	.15	544	106	.81	.06	.07	.07	.05
	65	*64*	*63*	*66*	*68*	*52*	*48*	*67*	*59*				
013.	2.4	1.4	0.9	1.0	-1.0	.23	NA	22	.69	.10	.08	.10	.06
	49	*48*	*45*	*50*	*38*	*59*		*40*	*52*				
014.	3.3	1.7	1.3	1.4	-0.0	.00	NA	32	.75	.10	.09	.09	.07
	58	*55*	*57*	*58*	*48*	*40*		*44*	*56*				
015.	3.2	1.7	1.3	1.3	-0.1	.05	1072	71	.86	.08	.07	.08	.06
	57	*55*	*58*	*58*	*47*	*44*	*52*	*56*	*63*				
016.	1.2	0.8	0.3	0.6	-1.3	NA	NA	24	NA	.12	.08	.10	.06
	38	*37*	*26*	*42*	*35*			*41*					
017.	0.9	0.6	1.1	0.3	NA	NA	NA	26	NA	.12	.13	.12	.05
	35	*34*	*52*	*36*				*42*					
018.	4.7	2.4	1.0	1.8	0.9	.37	446	89	.91	.07	.06	.08	.04
	71	*67*	*49*	*69*	*57*	*67*	*48*	*62*	*66*				
019.	1.9	1.3	0.9	0.6	-0.9	.05	NA	16	.27	.09	.09	.08	.06
	44	*46*	*46*	*43*	*39*	*44*		*38*	*24*				
020.	4.2	2.2	0.6	1.7	1.7	.48	638	62	.74	.08	.08	.08	.05
	66	*63*	*36*	*65*	*65*	*80*	*49*	*53*	*55*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 9.1 Program Measures (Raw and Standardized Values) in Sociology

Prog No.	University - Department/Academic Unit	Program Size (01)	(02)	(03)	Characteristics of Program Graduates (04)	(05)	(06)	(07)
021.	Connecticut, University of-Storrs	28	25	41	.44	8.7	.76	.32
	Sociology	*59*	*46*	*48*	*53*	*47*	*51*	*49*
022.	Cornell University-Ithaca	27	53	29	.57	7.4	.77	.44
	Sociology	*58*	*60*	*44*	*59*	*55*	*52*	*57*
023.	Denver, University of	10	7	30	NA	6.5	.70	.60
	*Sociology**	*36*	*37*	*44*		*61*	*45*	*68*
024.	Duke University	17	33	36	.70	6.3	.91	.50
	Sociology	*45*	*50*	*46*	*65*	*63*	*65*	*61*
025.	Emory University	13	16	18	.71	9.0	.86	.36
	Sociology	*40*	*42*	*41*	*66*	*45*	*60*	*52*
026.	Florida State University-Tallahassee	17	23	31	.55	7.5	.68	.23
	Sociology	*45*	*45*	*45*	*58*	*55*	*43*	*43*
027.	Florida, University of-Gainesville	20	21	39	.37	6.3	.68	.28
	Sociology	*49*	*44*	*47*	*50*	*63*	*43*	*46*
028.	Fordham University	16	35	93	.46	10.5	.83	.17
	Sociology and Anthropology	*44*	*51*	*63*	*54*	*35*	*57*	*39*
029.	Georgia, University of-Athens	18	31	36	.17	9.0	.83	.28
	Sociology	*46*	*49*	*46*	*40*	*45*	*57*	*46*
030.	Harvard University	23	67	77	.70	8.3	.83	.44
	*Sociology**	*53*	*66*	*59*	*65*	*49*	*57*	*57*
031.	Hawaii, University of	19	14	29	.20	7.8	.62	.08
	Sociology	*48*	*41*	*44*	*41*	*53*	*37*	*33*
032.	Illinois, University of-Chicago Circle	36	22	43	.14	7.8	.86	.48
	Sociology	*69*	*45*	*48*	*39*	*53*	*60*	*60*
033.	Illinois, University-Urbana/Champaign	30	35	50	.06	6.6	.75	.50
	Sociology	*61*	*51*	*50*	*35*	*60*	*50*	*61*
034.	Indiana University-Bloomington	33	38	79	.59	6.3	.88	.66
	Sociology	*65*	*52*	*59*	*60*	*62*	*62*	*72*
035.	Iowa State University-Ames	28	36	41	.09	5.9	.88	.67
	Sociology and Anthropology	*59*	*51*	*48*	*36*	*65*	*62*	*72*
036.	Iowa, University of-Iowa City	19	27	38	.17	8.0	.62	.28
	Sociology	*48*	*47*	*47*	*40*	*51*	*37*	*46*
037.	Johns Hopkins University	8	35	19	.73	6.0	.88	.59
	Social Relations	*34*	*51*	*41*	*67*	*64*	*62*	*67*
038.	Kansas State University-Manhattan	14	5	15	NA	NA	NA	NA
	*Sociology**	*41*	*36*	*40*				
039.	Kansas, University of	19	17	49	.19	8.3	.90	.32
	Sociology	*48*	*42*	*50*	*41*	*50*	*64*	*49*
040.	Kent State University	20	6	20	NA	NA	NA	NA
	*Sociology and Anthropology**	*49*	*37*	*41*				

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 9.1 Program Measures (Raw and Standardized Values) in Sociology

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
021.	2.4	1.5	1.0	0.9	-0.5	.04	899	41	.68	.09	.09	.10	.06
	49	50	48	49	43	43	51	47	51				
022.	3.5	2.0	1.0	1.4	1.6	.15	1004	87	.65	.08	.06	.08	.06
	59	60	49	60	64	52	51	61	63				
023.	1.3	0.7	0.9	0.8	NA	.10	1361	15	.60	.13	.11	.12	.07
	39	36	46	46		48	54	38	46				
024.	3.2	2.0	1.0	1.4	0.3	.53	594	78	.77	.08	.05	.07	.06
	56	59	49	60	51	84	49	58	57				
025.	1.7	1.1	0.8	0.7	-0.6	.08	NA	23	.77	.11	.13	.08	.06
	43	43	43	44	42	46		41	57				
026.	2.2	1.4	1.2	0.8	-0.4	.18	1571	64	.82	.10	.10	.08	.07
	48	49	56	46	44	55	55	54	61				
027.	1.9	1.1	1.1	0.6	0.8	.10	256	55	.85	.10	.10	.09	.06
	44	43	52	43	56	48	47	51	62				
028.	1.8	1.1	1.1	0.5	NA	.06	659	17	.31	.13	.12	.11	.06
	43	43	52	39		45	49	39	27				
029.	2.2	1.4	1.5	0.8	0.4	.22	707	63	.78	.11	.09	.10	.07
	47	48	64	47	52	59	49	54	58				
030.	4.3	2.3	0.7	1.8	3.0	.17	1119	141	.83	.09	.06	.07	.05
	67	65	37	67	78	55	52	79	61				
031.	1.8	1.0	0.8	0.5	-0.1	.00	182	22	.42	.11	.13	.12	.06
	44	40	41	39	47	40	46	40	34				
032.	2.7	1.5	1.5	1.1	NA	.00	193	50	.58	.09	.08	.08	.06
	51	51	64	52		40	46	49	45				
033.	3.5	2.0	1.2	1.5	2.0	.27	593	134	.83	.07	.06	.06	.06
	60	59	55	61	67	62	49	76	61				
034.	3.9	2.3	1.4	1.6	0.9	.21	487	99	.79	.07	.06	.07	.06
	63	66	62	63	57	58	48	65	58				
035.	1.8	1.4	1.1	0.5	-0.5	.00	911	62	.57	.12	.12	.11	.06
	44	48	51	39	43	40	51	53	44				
036.	2.3	1.4	1.0	0.8	0.3	.16	98	49	.79	.11	.10	.10	.06
	48	48	48	46	51	53	46	49	58				
037.	2.7	1.8	0.5	1.1	-0.4	NA	2299	40	NA	.12	.10	.09	.07
	52	55	31	53	44		59	46					
038.	1.2	0.9	1.0	0.3	NA	.07	90	17	.64	.11	.13	.06	.06
	37	39	49	36		46	46	39	49				
039.	2.0	1.3	1.1	0.8	0.1	.16	16	28	.63	.10	.09	.08	.06
	45	46	50	45	49	53	45	42	48				
040.	1.4	0.9	0.8	0.4	-1.8	.00	NA	33	.70	.13	.12	.11	.06
	40	39	43	38	30	40		44	52				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 9.1 Program Measures (Raw and Standardized Values) in Sociology

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
041.	Kentucky, University of	23	34	39	.51	8.4	.77	.29
	Sociology	*53*	*50*	*47*	*56*	*49*	*52*	*47*
042.	Louisiana State University-Baton Rouge	16	28	25	.08	7.9	.74	.39
	Sociology	*44*	*47*	*43*	*36*	*52*	*49*	*54*
043.	Loyola University of Chicago	14	13	39	.08	11.0	.58	.08
	Sociology	*41*	*40*	*47*	*36*	*31*	*34*	*33*
044.	Maryland, University of-College Park	33	22	45	.16	8.5	.68	.11
	Sociology	*65*	*45*	*49*	*39*	*48*	*43*	*35*
045.	Massachusetts, University of-Amherst	29	52	74	.21	7.5	.81	.39
	Sociology	*60*	*59*	*58*	*42*	*55*	*55*	*54*
046.	Michigan State University-East Lansing	36	47	106	.35	8.3	.59	.20
	Sociology	*69*	*57*	*67*	*49*	*49*	*34*	*41*
047.	Michigan, University of-Ann Arbor	38	68	94	.74	7.8	.82	.49
	Sociology	*72*	*67*	*64*	*67*	*53*	*56*	*60*
048.	Minnesota, University of	28	46	89	.42	7.6	.75	.40
	Sociology	*59*	*56*	*62*	*52*	*54*	*50*	*55*
049.	Mississippi State University-Starkville	12	20	16	.36	11.8	.86	.36
	Sociology	*39*	*44*	*40*	*49*	*27*	*60*	*52*
050.	Missouri, University of-Columbia	26	40	21	.44	9.4	.79	.27
	Sociology	*56*	*53*	*41*	*53*	*42*	*53*	*46*
051.	Nebraska, University of-Lincoln	17	19	24	.56	9.3	.89	.33
	Sociology	*45*	*43*	*42*	*58*	*43*	*63*	*50*
052.	New Hampshire, University of	16	18	17	.43	7.0	.79	.29
	Sociology and Anthropology	*44*	*43*	*40*	*52*	*58*	*53*	*47*
053.	New School for Social Research	3	30	36	.17	11.4	.48	.07
	Sociology	*28*	*48*	*46*	*40*	*29*	*24*	*32*
054.	New York University	19	56	48	.34	8.8	.81	.29
	Sociology	*48*	*61*	*50*	*48*	*46*	*55*	*47*
055.	North Carolina State University-Raleigh	25	12	22	.18	9.8	.73	.36
	Sociology and Anthropology	*55*	*40*	*42*	*41*	*40*	*47*	*52*
056.	North Carolina, University of-Chapel Hill	21	58	48	.81	6.9	.90	.49
	Sociology	*50*	*62*	*50*	*71*	*59*	*64*	*61*
057.	North Texas State University-Denton	10	12	20	.08	9.2	1.00	.25
	*Sociology and Anthropology**	*36*	*40*	*41*	*36*	*44*	*71*	*44*
058.	Northwestern University	21	36	53	.69	6.9	.65	.37
	Sociology	*50*	*51*	*51*	*65*	*58*	*40*	*52*
059.	Notre Dame, University of	14	33	29	.49	8.3	.73	.20
	Sociology and Anthropology	*41*	*50*	*44*	*55*	*49*	*48*	*41*
060.	Ohio State University-Columbus	22	55	44	.22	6.6	.78	.34
	Sociology	*51*	*61*	*49*	*42*	*60*	*53*	*50*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 9.1 Program Measures (Raw and Standardized Values) in Sociology

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
041.	2.0	1.4	0.9	0.7	-0.1	.00	NA	67	.74	.12	.11	.09	.07
	46	*49*	*46*	*45*	*47*	*40*		*55*	*55*				
042.	0.9	0.9	0.6	0.4	-0.3	.00	240	27	.56	.11	.11	.11	.06
	35	*39*	*36*	*36*	*45*	*40*	*47*	*42*	*43*				
043.	1.6	0.9	1.0	0.6	NA	.00	NA	30	.71	.10	.11	.08	.06
	41	*38*	*50*	*41*		*40*		*43*	*53*				
044.	2.7	1.6	1.6	1.1	0.2	.03	177	69	.55	.09	.08	.08	.06
	52	*52*	*67*	*53*	*50*	*43*	*46*	*56*	*42*				
045.	3.4	2.0	1.6	1.4	-0.7	.03	369	94	.79	.08	.06	.07	.06
	58	*59*	*69*	*60*	*41*	*43*	*47*	*64*	*59*				
046.	2.8	1.8	0.8	1.2	0.3	.11	2131	48	.47	.09	.06	.06	.06
	53	*56*	*43*	*55*	*51*	*49*	*58*	*49*	*37*				
047.	4.5	2.6	0.8	1.7	1.8	.45	12106	136	.71	.07	.05	.06	.05
	69	*71*	*42*	*67*	*66*	*78*	*99*	*77*	*53*				
048.	3.3	2.0	0.9	1.2	1.2	.21	1357	73	.75	.09	.07	.09	.06
	58	*60*	*46*	*56*	*60*	*58*	*53*	*57*	*56*				
049.	0.8	0.6	0.9	0.3	NA	.00	756	11	.42	.12	.12	.10	.06
	33	*34*	*45*	*35*		*40*	*50*	*37*	*34*				
050.	2.6	1.5	1.2	0.8	-0.2	.00	548	64	.77	.11	.08	.08	.07
	49	*50*	*55*	*46*	*46*	*40*	*49*	*54*	*57*				
051.	2.1	1.3	1.0	0.7	-0.5	.00	223	43	.65	.10	.10	.08	.06
	46	*47*	*49*	*43*	*43*	*40*	*47*	*47*	*49*				
052.	1.9	1.0	1.1	0.7	NA	.06	NA	22	.56	.09	.11	.06	.06
	44	*40*	*51*	*44*		*45*		*40*	*43*				
053.	1.6	0.9	0.3	1.1	NA	NA	NA	10	NA	.16	.12	.06	.07
	41	*39*	*26*	*53*				*37*					
054.	3.3	1.8	1.1	1.4	0.5	.05	59	28	.37	.08	.07	.08	.06
	57	*56*	*53*	*59*	*53*	*44*	*46*	*42*	*30*				
055.	1.4	1.0	0.9	0.3	NA	.04	NA	36	.48	.14	.14	.14	.06
	40	*41*	*45*	*36*		*43*		*45*	*38*				
056.	4.3	2.5	1.2	1.8	1.0	.14	2083	98	.91	.07	.05	.07	.05
	67	*69*	*54*	*67*	*58*	*52*	*58*	*65*	*66*				
057.	0.5	0.3	NA	0.2	NA	.10	487	14	.40	.08	.10	NA	.04
	31	*28*		*32*		*48*	*48*	*38*	*32*				
058.	3.3	1.9	1.3	1.4	0.3	.14	23	43	.71	.08	.07	.07	.06
	58	*57*	*58*	*59*	*51*	*52*	*45*	*47*	*53*				
059.	1.8	1.2	0.8	0.7	-1.3	.07	NA	18	.57	.11	.10	.10	.06
	43	*45*	*42*	*43*	*35*	*46*		*39*	*44*				
060.	2.4	1.5	0.7	0.9	0.9	.09	725	49	.82	.09	.08	.07	.06
	49	*50*	*39*	*49*	*57*	*48*	*50*	*49*	*60*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 9.1 Program Measures (Raw and Standardized Values) in Sociology

Prog No.	University - Department/Academic Unit	Program Size (01)	Program Size (02)	Program Size (03)	Characteristics of Program Graduates (04)	Characteristics of Program Graduates (05)	Characteristics of Program Graduates (06)	Characteristics of Program Graduates (07)
061.	Oklahoma State University-Stillwater	17	25	24	.31	6.1	.83	.13
	Sociology	*45*	*46*	*42*	*47*	*64*	*58*	*36*
062.	Oregon, University of-Eugene	19	22	40	.58	8.5	.71	.29
	Sociology	*48*	*45*	*47*	*60*	*48*	*46*	*47*
063.	Pennsylvania State University	17	25	21	.17	7.0	.69	.28
	Sociology	*45*	*46*	*41*	*40*	*58*	*44*	*46*
064.	Pennsylvania, University of	29	61	51	.48	7.5	.73	.28
	Sociology	*60*	*63*	*51*	*55*	*55*	*48*	*47*
065.	Pittsburgh, University of	23	31	52	.35	9.1	.74	.35
	Sociology	*53*	*49*	*51*	*48*	*44*	*49*	*51*
066.	Princeton University	17	27	35	.36	8.0	.74	.41
	Sociology	*45*	*47*	*46*	*49*	*51*	*49*	*55*
067.	Purdue University-West Lafayette	25	31	31	.41	5.5	.76	.40
	Sociology and Anthropology	*55*	*49*	*45*	*51*	*68*	*51*	*54*
068.	Rutgers, The State University-New Brunswick	37	60	137	.26	8.9	.77	.33
	Sociology	*70*	*63*	*77*	*44*	*46*	*52*	*50*
069.	SUNY at Albany	27	10	44	NA	NA	NA	NA
	*Sociology**	*58*	*39*	*49*				
070.	SUNY at Binghamton	10	14	69	NA	NA	NA	NA
	*Sociology**	*36*	*41*	*56*				
071.	SUNY at Buffalo	20	28	54	.35	8.4	.82	.31
	Sociology	*49*	*47*	*55*	*48*	*49*	*57*	*48*
072.	SUNY at Stony Brook	30	36	88	.33	7.9	.81	.52
	Sociology	*61*	*51*	*62*	*48*	*52*	*55*	*63*
073.	Southern California, University of	19	43	80	.59	8.1	.66	.26
	Sociology	*48*	*55*	*59*	*60*	*51*	*41*	*45*
074.	Southern Illinois University-Carbondale	17	37	27	.14	9.0	.79	.29
	Sociology	*45*	*52*	*43*	*38*	*45*	*53*	*47*
075.	Stanford University	16	47	48	.75	7.5	.80	.46
	Sociology	*44*	*57*	*50*	*67*	*55*	*55*	*58*
076.	Syracuse University	17	24	32	.19	10.0	.69	.31
	Sociology	*45*	*45*	*45*	*41*	*38*	*44*	*49*
077.	Temple University	28	27	57	.29	10.5	.58	.00
	Sociology	*59*	*47*	*52*	*46*	*35*	*33*	*28*
078.	Tennessee, University of-Knoxville	14	22	23	.28	8.0	.76	.36
	Sociology	*41*	*45*	*42*	*45*	*51*	*51*	*52*
079.	Texas Woman's University-Denton	4	13	19	.00	9.0	.58	.42
	*Sociology and Social Work**	*29*	*40*	*41*	*32*	*45*	*34*	*56*
080.	Texas, University of-Austin	28	60	86	.23	7.3	.78	.33
	Sociology	*59*	*63*	*61*	*43*	*56*	*52*	*50*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 9.1 Program Measures (Raw and Standardized Values) in Sociology

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
061.	0.9	0.6	1.0	0.2	-1.9	.00	53	21	.59	.10	.11	.10	.05
	35	*34*	*49*	*34*	*29*	*40*	*45*	*40*	*45*				
062.	2.3	1.5	0.8	0.9	-0.9	.05	NA	31	.47	.09	.08	.09	.06
	48	*50*	*42*	*49*	*39*	*44*		*43*	*37*				
063.	2.2	1.6	1.1	0.9	0.7	.12	NA	43	.77	.10	.10	.10	.07
	47	*51*	*53*	*47*	*55*	*50*		*47*	*57*				
064.	3.9	2.1	1.3	1.5	0.7	.10	759	72	.66	.08	.07	.07	.06
	63	*61*	*58*	*62*	*55*	*49*	*50*	*57*	*49*				
065.	2.5	1.6	0.9	0.8	0.1	.09	246	34	.52	.09	.10	.10	.07
	50	*53*	*46*	*46*	*49*	*47*	*47*	*44*	*41*				
066.	3.6	2.0	1.0	1.5	0.9	.29	583	59	.59	.09	.07	.06	.06
	60	*59*	*47*	*61*	*57*	*65*	*49*	*52*	*45*				
067.	2.3	1.5	0.8	0.9	-0.5	.04	241	61	.68	.08	.09	.07	.06
	48	*50*	*43*	*48*	*43*	*43*	*47*	*53*	*51*				
068.	3.1	1.7	1.3	1.2	0.8	.03	529	59	.65	.10	.08	.08	.07
	56	*54*	*59*	*55*	*56*	*42*	*48*	*52*	*49*				
069.	3.1	1.8	1.9	1.3	-1.0	.07	NA	76	.67	.10	.08	.04	.07
	56	*55*	*78*	*57*	*38*	*46*		*58*	*50*				
070.	2.7	1.5	1.6	1.1	NA	.40	97	48	.60	.14	.11	.07	.07
	52	*51*	*68*	*52*		*74*	*46*	*49*	*46*				
071.	2.4	1.3	0.8	0.7	0.3	.05	NA	33	.70	.10	.09	.09	.05
	49	*48*	*41*	*45*	*51*	*44*		*44*	*52*				
072.	3.7	2.0	1.3	1.5	-0.6	.10	235	78	.63	.07	.06	.09	.05
	62	*60*	*59*	*62*	*42*	*48*	*47*	*58*	*48*				
073.	3.4	1.9	1.4	1.3	0.4	.26	216	86	.84	.08	.07	.07	.06
	58	*57*	*61*	*58*	*52*	*62*	*46*	*61*	*62*				
074.	1.6	1.0	0.9	0.6	-0.2	.06	53	41	.59	.10	.10	.09	.06
	42	*40*	*44*	*42*	*46*	*45*	*45*	*47*	*45*				
075.	4.2	2.3	1.3	1.6	2.0	.25	222	72	.88	.07	.06	.07	.05
	66	*66*	*60*	*64*	*68*	*61*	*47*	*57*	*64*				
076.	2.2	1.3	0.9	1.0	-0.3	.00	456	53	.65	.09	.10	.09	.06
	48	*47*	*44*	*50*	*45*	*40*	*48*	*50*	*49*				
077.	2.1	1.3	1.1	0.7	-0.4	.04	1457	36	.50	.11	.11	.09	.06
	47	*47*	*51*	*45*	*44*	*43*	*54*	*45*	*39*				
078.	1.6	1.0	1.1	0.6	-0.4	.00	27	25	.64	.11	.10	.08	.06
	41	*42*	*53*	*42*	*44*	*40*	*45*	*41*	*49*				
079.	0.2	0.2	NA	0.1	NA	NA	NA	2	NA	.08	.12	NA	.03
	28	*27*		*30*				*34*					
080.	3.5	2.0	1.3	1.4	1.6	.14	1275	78	.82	.08	.08	.09	.06
	60	*60*	*59*	*59*	*64*	*52*	*53*	*58*	*61*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 9.1 Program Measures (Raw and Standardized Values) in Sociology

Prog No.	University - Department/Academic Unit	Program Size			Characteristics of Program Graduates			
		(01)	(02)	(03)	(04)	(05)	(06)	(07)
081.	Tulane University	9	9	17	.75	7.7	.67	.17
	Sociology	*35*	*38*	*40*	*68*	*53*	*42*	*39*
082.	Utah, University of-Salt Lake City	19	19	21	.14	7.3	.85	.15
	Sociology	*48*	*43*	*41*	*39*	*56*	*59*	*38*
083.	Vanderbilt University	14	25	24	.50	7.8	.83	.39
	Sociology and Anthropology	*41*	*46*	*42*	*56*	*52*	*57*	*54*
084.	Virginia Polytechnic Institute & State Univ	17	10	12	NA	NA	NA	NA
	*Sociology**	*45*	*39*	*39*				
085.	Virginia, University of	19	11	33	NA	NA	NA	NA
	Sociology	*48*	*39*	*45*				
086.	Washington State University-Pullman	26	72	42	.38	7.3	.93	.69
	Sociology	*56*	*69*	*48*	*50*	*56*	*67*	*74*
087.	Washington University-Saint Louis	15	32	41	.28	7.9	.71	.34
	Sociology	*43*	*49*	*48*	*45*	*52*	*46*	*51*
088.	Washington, University of-Seattle	27	37	35	.59	8.2	.72	.49
	Sociology	*58*	*52*	*46*	*60*	*50*	*47*	*60*
089.	Wayne State University	24	29	14	.14	10.2	.59	.10
	Sociology	*54*	*48*	*39*	*38*	*37*	*34*	*34*
090.	Western Michigan University	20	23	28	.13	7.0	.75	.19
	Sociology	*49*	*45*	*44*	*38*	*58*	*50*	*40*
091.	Wisconsin, University of-Madison	45	115	171	.59	7.5	.88	.59
	Sociology	*80*	*90*	*87*	*60*	*55*	*62*	*67*
092.	Yale University	21	40	56	.76	7.0	.78	.54
	Sociology	*50*	*53*	*52*	*68*	*58*	*53*	*64*

* indicates program was initiated since 1970.

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 9.1 Program Measures (Raw and Standardized Values) in Sociology

Prog No.	Survey Results				University Library	Research Support		Published Articles		Survey Ratings Standard Error			
	(08)	(09)	(10)	(11)	(12)	(13)	(14)	(17)	(18)	(08)	(09)	(10)	(11)
081.	1.0	0.7	0.6	0.5	-1.0	NA	NA	14	NA	.12	.11	.11	.06
	36	*35*	*35*	*38*	*38*			*38*					
082.	1.4	0.9	1.1	0.4	-0.6	.05	NA	36	.68	.11	.12	.10	.05
	39	*40*	*53*	*37*	*42*	*44*		*45*	*51*				
083.	2.8	1.7	0.9	1.3	-0.7	.07	NA	55	.71	.08	.08	.11	.07
	53	*53*	*46*	*56*	*41*	*46*		*51*	*53*				
084.	1.5	1.0	1.2	0.7	-0.0	.00	86	58	.82	.12	.11	.10	.07
	41	*41*	*56*	*43*	*48*	*40*	*46*	*52*	*61*				
085.	2.7	1.5	1.5	1.2	0.7	.21	283	32	.68	.10	.10	.08	.07
	52	*50*	*64*	*56*	*55*	*58*	*47*	*44*	*51*				
086.	3.1	2.0	1.3	1.2	-0.3	.19	195	80	.69	.09	.06	.08	.07
	56	*59*	*58*	*55*	*45*	*56*	*46*	*59*	*52*				
087.	2.1	1.3	0.3	0.8	-0.4	.13	NA	27	.47	.11	.10	.07	.06
	46	*46*	*27*	*46*	*44*	*51*		*42*	*37*				
088.	4.0	2.3	1.4	1.6	1.5	.26	488	111	.74	.06	.07	.07	.05
	64	*66*	*62*	*63*	*62*	*62*	*48*	*69*	*55*				
089.	1.4	0.9	0.7	0.6	-0.4	.04	500	35	.50	.09	.09	.09	.06
	40	*39*	*38*	*41*	*44*	*44*	*48*	*45*	*39*				
090.	1.3	0.8	1.0	0.4	NA	.05	NA	29	.50	.10	.10	.08	.06
	38	*37*	*49*	*37*		*44*		*43*	*39*				
091.	4.6	2.7	1.0	1.9	1.6	.40	5781	145	.76	.06	.05	.07	.04
	70	*73*	*50*	*70*	*63*	*74*	*81*	*80*	*56*				
092.	3.7	1.9	1.0	1.5	2.1	.14	75	55	.71	.08	.06	.07	.05
	62	*58*	*49*	*63*	*69*	*52*	*46*	*51*	*53*				

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available.

TABLE 9.2 Summary Statistics Describing Each Program Measure--Sociology

Measure	Number of Programs Evaluated	Mean	Standard Deviation	DECILES								
				1	2	3	4	5	6	7	8	9
Program Size												
01 Raw Value	92	21	8	10	14	17	17	19	21	24	28	30
Std Value	92	50	10	36	41	45	45	48	50	54	59	61
02 Raw Value	92	33	21	11	16	21	25	29	33	37	47	60
Std Value	92	50	10	39	42	44	46	48	50	52	57	63
03 Raw Value	92	49	33	18	22	28	34	39	44	52	76	94
Std Value	92	50	10	41	42	44	45	47	49	51	58	64
Program Graduates												
04 Raw Value	82	.38	.21	.13	.17	.21	.29	.35	.44	.52	.58	.69
Std Value	82	50	10	38	40	42	46	49	53	57	60	65
05 Raw Value	83	8.2	1.5	10.3	9.1	8.7	8.3	8.0	7.8	7.5	7.0	6.5
Std Value	83	50	10	36	44	47	49	51	53	55	58	61
06 Raw Value	84	.75	.10	.62	.66	.69	.73	.76	.79	.81	.84	.88
Std Value	84	50	10	37	41	44	48	51	54	56	59	63
07 Raw Value	84	.33	.15	.14	.20	.27	.29	.32	.36	.39	.46	.53
Std Value	84	50	10	37	41	46	47	49	52	54	59	63
Survey Results												
08 Raw Value	92	2.5	1.1	1.2	1.5	1.8	2.1	2.4	2.7	3.1	3.4	4.0
Std Value	92	50	10	38	40	43	46	49	52	56	59	64
09 Raw Value	92	1.5	.5	.8	1.0	1.1	1.3	1.5	1.6	1.8	2.0	2.2
Std Value	92	50	10	38	41	43	47	51	52	56	60	64
10 Raw Value	90	1.0	.3	.7	.8	.9	1.0	1.0	1.1	1.2	1.3	1.4
Std Value	90	50	10	39	42	45	49	49	52	55	55	62
11 Raw Value	92	1.0	.5	.4	.5	.7	.8	.9	1.1	1.2	1.4	1.6
Std Value	92	50	10	37	40	44	46	48	53	55	60	64
University Library												
12 Raw Value	73	.2	1.0	-1.0	-.6	-.4	-.3	.0	.3	.7	.9	1.7
Std Value	73	50	10	38	42	44	45	48	51	55	57	65
Research Support												
13 Raw Value	86	.12	.12	.00	.00	.04	.06	.08	.11	.15	.21	.27
Std Value	86	50	10	40	40	43	45	47	49	53	58	63
14 Raw Value	66	790	1630	53	97	205	237	369	517	642	909	1399
Std Value	66	50	10	45	46	46	47	47	48	49	51	54
Publication Records												
17 Raw Value	92	52	31	16	24	32	36	45	55	63	75	90
Std Value	92	50	10	39	41	44	45	48	51	54	57	62
18 Raw Value	86	.66	.15	.45	.52	.59	.65	.68	.71	.76	.80	.84
Std Value	86	50	10	36	41	45	49	51	53	57	59	62

NOTE: Standardized values reported in the preceding table have been computed from exact values of the mean and standard deviation and not the rounded values reported here.

TABLE 9.3 Intercorrelations Among Program Measures on 92 Programs in Sociology

	Measure															
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	17	18
Program Size																
01		.55	.62	.05	.20	.06	.24	.62	.65	.39	.54	.43	.18	.37	.69	.17
02			.68	.31	.18	.19	.32	.72	.73	-.03	.68	.54	.46	.38	.63	.25
03				.15	-.08	.00	.12	.60	.59	.13	.55	.47	.43	.30	.47	.04
Program Graduates																
04					.23	.29	.39	.51	.52	-.04	.50	.20	.43	.31	.33	.34
05						.30	.41	.29	.33	.24	.27	.10	.16	.10	.36	.50
06							.50	.15	.19	.17	.12	.07	.15	.15	.21	.16
07								.47	.51	.17	.49	.34	.36	.22	.47	.38
Survey Results																
08									.98	.33	.97	.75	.63	.30	.80	.49
09										.33	.94	.72	.63	.37	.82	.49
10											.30	.15	.07	-.18	.37	.32
11												.72	.64	.29	.77	.50
University Library																
12													.57	.25	.68	.48
Research Support																
13														.38	.54	.34
14															.45	.11
Publication Records																
17																.63
18																

NOTE: Since in computing correlation coefficients program data must be available for both of the measures being correlated, the actual number of programs on which each coefficient is based varies.

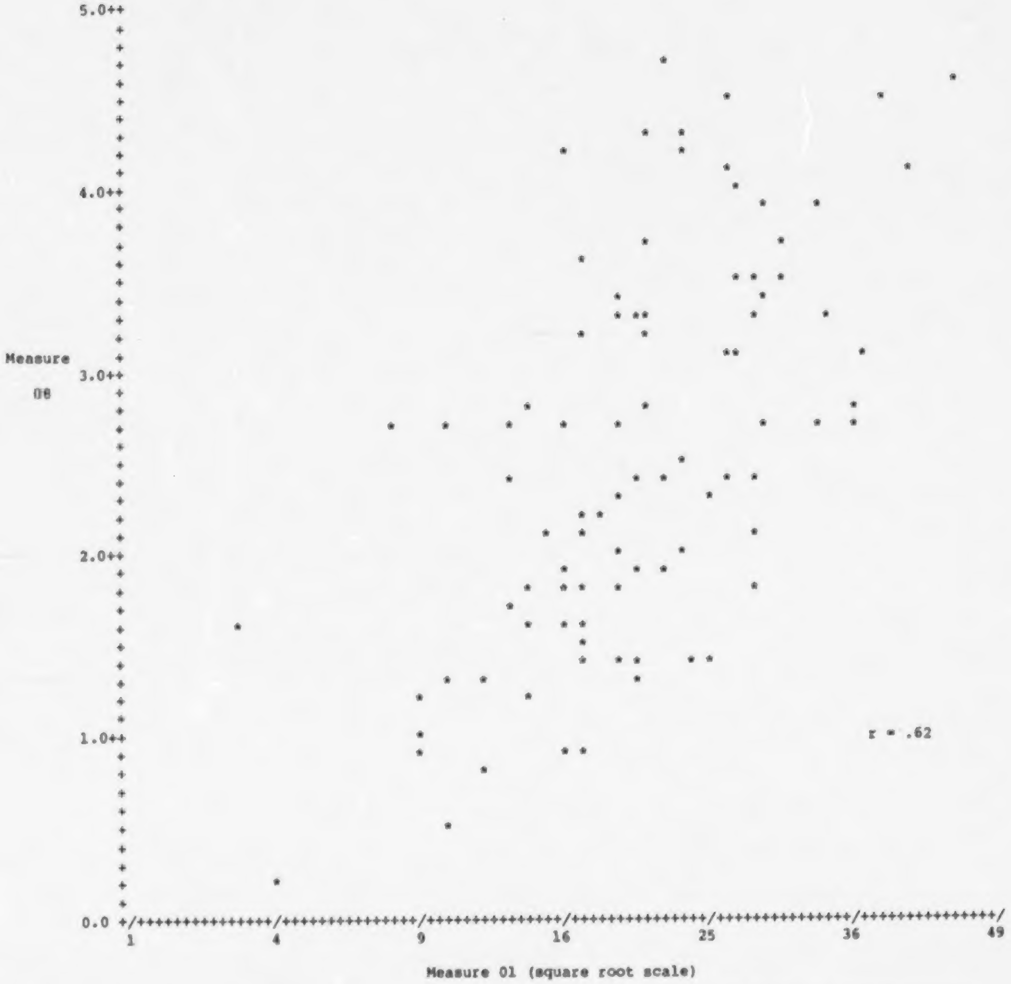


FIGURE 9.1 Mean rating of scholarly quality of faculty (measure 08) versus number of faculty members (measure 01)--92 programs in sociology.

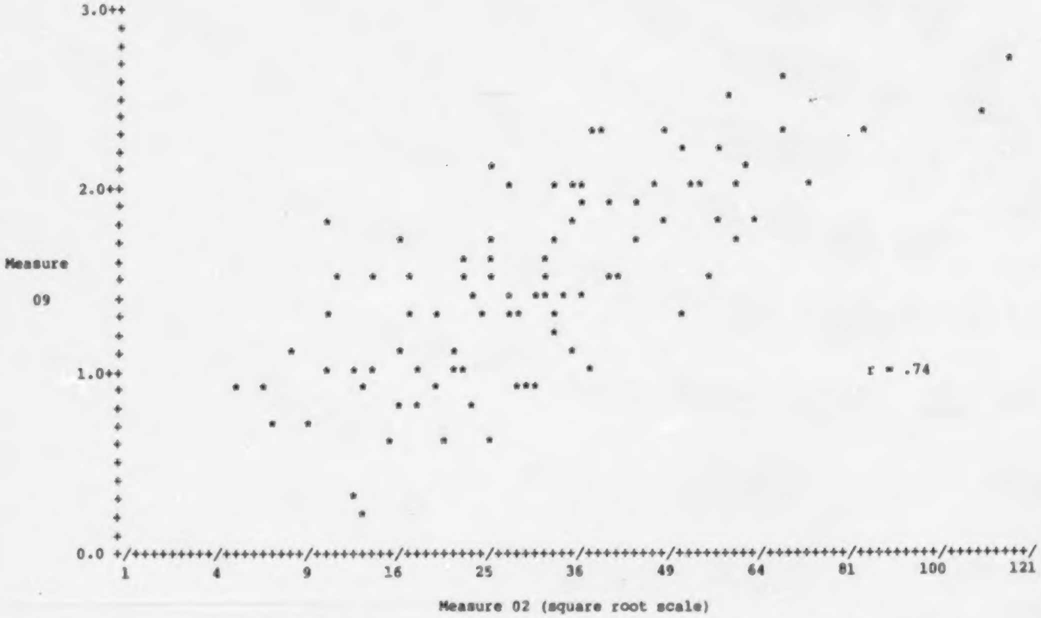


FIGURE 9.2 Mean rating of program effectiveness in educating research scholars/scientists (measure 09) versus number of graduates in last five years (measure 02)--92 programs in sociology.

TABLE 9.4 Characteristics of Survey Participants in Sociology

	Respondents	
	N	%
Field of Specialization		
Demography	12	7
Sociology	163	90
Other/Unknown	6	3
Faculty Rank		
Professor	86	48
Associate Professor	56	31
Assistant Professor	38	21
Other/Unknown	1	1
Year of Highest Degree		
Pre-1950	7	4
1950-59	37	20
1960-69	59	33
Post-1969	78	43
Evaluator Selection		
Nominated by Institution	155	86
Other	26	14
Survey Form		
With Faculty Names	164	91
Without Names	17	9
Total Evaluators	181	100

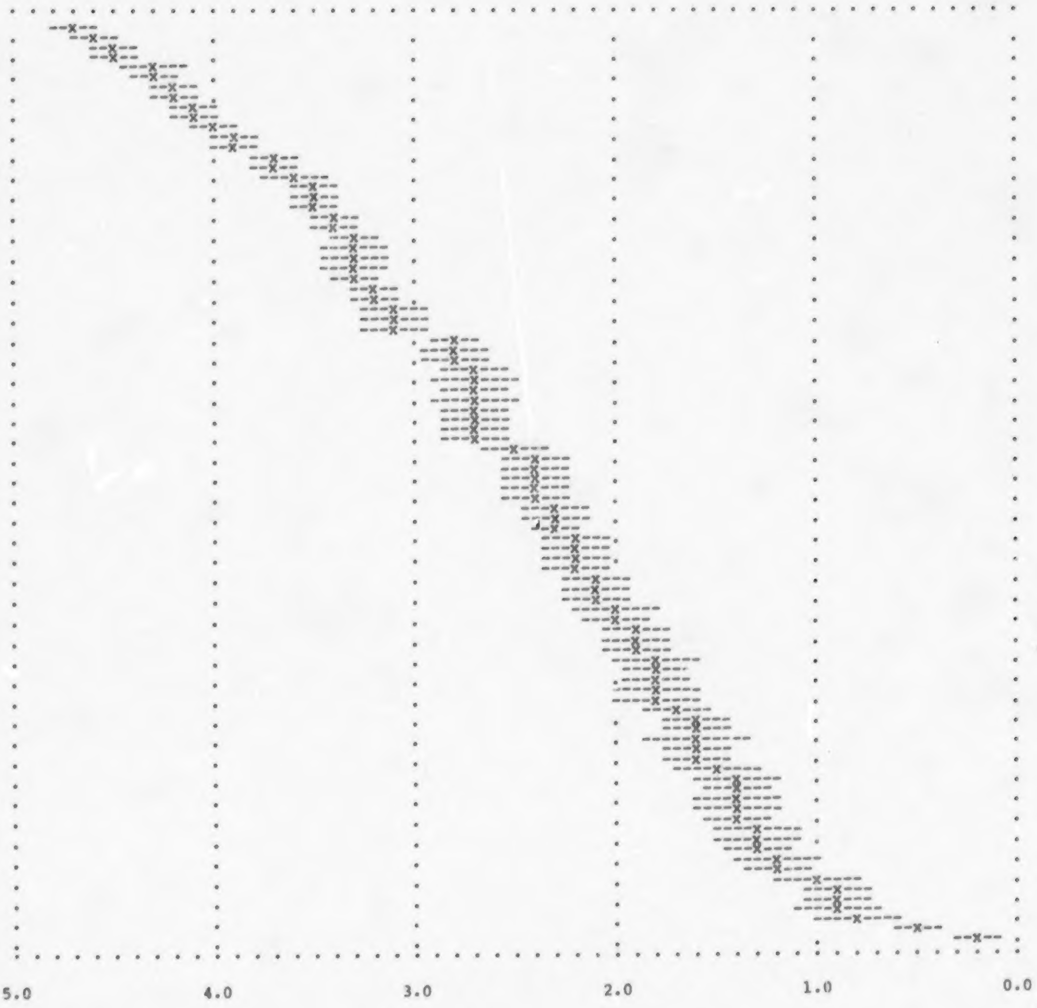


FIGURE 9.3 Mean rating of scholarly quality of faculty in 92 programs in sociology.

NOTE: Programs are listed in sequence of mean rating, with the highest-rated program appearing at the top of the page. The broken lines (---) indicate a confidence interval of ±1.5 standard errors around the reported mean (x) of each program.

X

Summary and Discussion

Results of the assessment of 639 research-doctorate programs in anthropology, economics, geography, history, political science, psychology, and sociology are presented in the preceding seven chapters. Included in each chapter are summary data describing the means and intercorrelations of the program measures for each discipline. In this chapter a comparison is made of the summary data reported in the seven disciplines. Also presented here are an analysis of the reliability (consistency) of the reputational survey ratings and an examination of some factors that might possibly have influenced the survey results. This chapter concludes with suggestions for improving studies of this kind--with particular attention given to the types of measures one would like to have available for an assessment of research-doctorate programs.

This chapter necessarily involves a detailed discussion of various statistics (means, standard deviations, correlation coefficients) describing the measures. Throughout, the reader should bear in mind that all these statistics and measures are necessarily imperfect attempts to describe the real quality of research-doctorate programs. Quality and some differences in quality are real, but these differences cannot be subsumed completely under any one quantitative measure. For example, no single numerical ranking--by measure 08 or by any weighted average of measures--can rank the quality of different programs with precision.

However, the evidence for reliability indicates considerable stability in the assessment of quality. For instance, a program that comes out in the first decile of a ranking is quite unlikely to "really" belong in the third decile, or vice versa. If numerical ranks of programs were replaced by groupings (distinguished, strong, etc.), these groupings again would not fully capture actual differences in quality since there would likely be substantial ambiguity about the borderline between adjacent groups. Furthermore, any attempt at linear ordering (best, next best, . . .) may also be inaccurate. Programs of roughly comparable quality may be better in different ways, so that there simply is no one best--as will also be indicated in some of the numerical analyses. However, these difficulties of formulating ranks should not hide the underlying reality of differences in quality or the importance of high quality for effective doctoral education.

SUMMARY OF THE RESULTS

Displayed in Table 10.1 are the numbers of programs evaluated (bottom line) and the mean values for each measure in the seven social and behavioral science disciplines.[1] As can be seen, the mean values reported for individual measures vary considerably among disciplines. The pattern of means on each measure is summarized below, but the reader interested in a detailed comparison of the distribution of a measure may wish to refer to the second table in each of the seven preceding chapters.[2]

Program Size (Measures 01-03). Based on the information provided to the committee by the study coordinator at each university, psychology programs had, on the average, the largest number of faculty members (29 in December 1980), followed by history (28). Psychology programs graduated the most students (71 Ph.D. recipients in the FY1975-79 period) and had the largest enrollment (102 doctoral students in December 1980). In contrast, geography programs were reported to have an average of only 13 faculty members, 16 graduates, and 22 doctoral students.

Program Graduates (Measures 04-07). The mean fraction of FY1975-79 doctoral recipients who as graduate students had received some national fellowship or training grant support (measure 04) ranges from .21 for graduates of economics programs to .48 for graduates in anthropology. With respect to the median number of years from first enrollment in a graduate program to receipt of the doctorate (measure 05), psychology graduates typically earned their degrees more than a year sooner than graduates in any other discipline. Graduates in geography and history reported the longest median times to the Ph.D. In terms of employment status at graduation (measure 06), an average of 78 percent of the Ph.D. recipients from economics programs reported that they had made firm job commitments by the time they had completed requirements for their degree, contrasted with 56 percent of the program graduates in history. A mean of 33 percent of the sociology graduates indicated that they had made firm commitments to take positions in Ph.D.-granting institutions (measure 07), while only 16 percent of those in history had made such plans. The low averages in history for measures 06 and 07 may be due, in part, to an apparent shortage of faculty openings in this discipline in recent years.

Survey Results (Measures 08-11). Differences in the mean ratings derived from the reputational survey are not large. The mean rating of scholarly quality of program faculty (measure 08) ranges from 2.3 in

---

[1] As noted in Chapter II, for programs in history, data are not presented for measures 13 and 14; in anthropology and geography, data are not available for measure 14.

[2] The second table in each of the seven preceding chapters presents the standard deviation and decile values for each measure.

TABLE 10.1 Mean Values for Each Program Measure, by Discipline

	Anthropology	Economics	Geography	History	Political Science	Psychology	Sociology
Program Size							
01	17	23	13	28	23	29	21
02	28	41	16	38	35	71	33
03	51	68	22	51	50	102	49
Program Graduates							
04	.48	.21	.26	.26	.28	.39	.38
05	8.3	7.3	8.7	9.2	8.3	6.2	8.2
06	.60	.78	.72	.56	.68	.69	.75
07	.28	.26	.28	.16	.26	.24	.33
Survey Results							
08	2.8	2.3	2.8	2.6	2.6	2.5	2.5
09	1.6	1.3	1.6	1.6	1.5	1.6	1.5
10	1.0	1.1	1.0	1.1	1.1	1.1	1.0
11	1.1	.9	1.2	.9	1.0	.7	1,0
University Library							
12	.4	.1	.4	.2	.2	.1	.2
Research Support							
13	.22	.11	.14	NA	.06	.21	.12
14	NA	832	NA	NA	520	1003	790
Publication Records							
17	30	52	17	43	43	81	52
18	.61	.63	.51	.58	.63	.66	.66
Total Programs	70	93	49	102	83	150	92

economics to 2.8 in anthropology and geography, and programs were judged to be, on the average, between "reasonably" (2.0) and "minimally" (1.0) effective in educating research scholars/scientists (measure 09). In the opinions of the survey respondents, there has been "little or no change" (approximately 1.0 on measure 10) in the last five years in the overall average quality of programs. The mean rating of an evaluator's familiarity with the work of program faculty (measure 11) is close to 1.0 ("some familiarity") in every discipline except psychology (0.7)--about which more will be said later in this chapter.

The reader should be reminded that the distribution of ratings may vary from one discipline to another. If one examines, for example, the top program ratings recorded for measure 08 in each discipline, one finds noticeably higher top ratings in economics (five programs with ratings above 4.7) and history (three programs with ratings above 4.7) than in either anthropology and geography (no programs with ratings above 4.6). The study committee does not have an explanation of this observation but wishes to emphasize that many differences may be found in the distributions of survey ratings in the various disciplines and that the determinants of these differences are not known. As discussed in Chapter II, the survey ratings reflect each program's standing relative to other programs in the same discipline and provide no basis for making comparisons across disciplines.

University Library (Measure 12). Measure 12, based on a composite index of the size[3] of the library in the university in which a program resides, is calculated on a scale from -2.0 to 3.0, with means ranging from .1 in economics and psychology to .4 in anthropology and geography. These differences may be explained, in large part, by the number of programs evaluated in each discipline. In the disciplines with the fewest doctoral programs (anthropology and geography), the programs included are typically found in the larger institutions, which are likely to have high scores on the library size index. Ph.D. programs in economics and psychology are found in a much broader spectrum of universities that includes the smaller institutions as well as the larger ones.

Research Support (Measures 13-14). Measure 13, the proportion of program faculty who had received ADAMHA, NIH, OR NSF[4] research grant awards during the FY1978-80 period, has mean values ranging from .22 and .21 in anthropology and psychology, respectively, to .06 in political science. It should be emphasized that this measure does not take into account research support that faculty members have received from sources other than these three federal agencies. In terms of total university expenditures for R&D in a particular discipline (measure 14), the mean values are reported to range from $520,000 in political science to $1,003,000 in psychology. (As noted earlier, data are available for programs in only four of the seven disciplines.) The large differences in reported expenditures are likely to be related to three factors: the differential availability of research support in each of the disciplines, the differential average cost of doing research, and the differing numbers of individuals involved in the research effort.

---

[3] The index, derived by the Association of Research Libraries, reflects a number of different measures, including number of volumes, fiscal expenditures, and other factors relevant to the size of a university library. See the description of this measure presented in Appendix D.

[4] Alcohol, Drug Abuse, and Mental Health Administration; National Institutes of Health; and National Science Foundation.

Publication Records (Measures 17 and 18). Considerable diversity is found in the mean number of articles by program faculty (measure 17).[5] An average of 81 articles published in the 1978-80 period have been attributed to program faculty members in psychology, contrasted with 17 articles by geography program faculty. These large differences reflect both the average faculty size in a particular discipline and the frequency with which scientists in that discipline publish; it may also depend on the length of a typical paper in a discipline. With respect to measure 18, the fraction of faculty who had published at least one article during this three-year period, the differences among the means in the seven disciplines are much smaller. The largest fractions are found in psychology and sociology (.66) and the smallest in geography (.51).

CORRELATIONS AMONG MEASURES

Relations among the program measures are of intrinsic interest and are relevant to the issue of validity of the measures as indices of the quality of a research-doctorate program. Measures that are logically related to program quality are expected to be related to each other. To the extent that they are, a stronger case might be made for the validity of each as a quality measure.

A reasonable index of the relationship between any two measures is the Pearson product-moment correlation coefficient. A table of correlation coefficients of all possible pairs of measures is presented in each of the seven preceding chapters. This chapter presents selected correlations to determine the extent to which coefficients are comparable in the seven disciplines. Special attention is given to the correlations involving the number of FY1975-79 program graduates (measure 02), survey rating of the scholarly quality of program faculty (measure 08), university R&D expenditures in a particular discipline (measure 14), and the total number of faculty articles (measure 17). These four measures have been selected because of their relatively high correlations with several other measures. Readers interested in correlations other than those presented in Tables 10.2-10.5 may refer to the third table in each of the preceding chapters.

---

[5] See Appendix J for two alternative measures of publication records that have been compiled for programs in psychology.

Correlations with Measure 02. Table 10.2 presents the correlations of measure 02 with each of the other measures used in the assessment. As might be expected, correlations of this measure with the other two measures of program size--number of faculty and doctoral student enrollment--are reasonably high in all seven disciplines. Of greater interest are the strong positive correlations between measure 02 and measures derived from either reputational survey ratings or publication records. The coefficients describing the relationship of measure 02 with measure 17 are greater than .60 in anthropology, economics, history, and sociology and approximately .50 in the other three disciplines. The correlations with measure 18, the fraction of faculty with one or more articles published during the 1978-80 period, are much smaller. This result is not surprising, of course, since measure 17 reflects the total number of articles by program faculty, while measure 18 reflects the fraction of faculty members who publish (and is not size dependent). The correlations of measure 02 with measures 08, 09, and 11 are also moderately high--.56 or greater in all disciplines except psychology. It is quite apparent that the programs that received high survey ratings and with which evaluators were more likely to be familiar were also ones that had larger numbers of graduates. The weaker relationship in psychology may be explained, in part, by the fact that some of the programs have produced large numbers of graduates in clinical areas of psychology and may not have distinguished reputations in research. Although the committee gave serious consideration to presenting an alternative set of survey measures that were adjusted for program size, a satisfactory algorithm for making such an adjustment was not found. In attempting such an adjustment on the basis of the regression of survey ratings on measures of program size, it was found that some exceptionally large programs appeared to be unfairly penalized and that some very small programs received unjustifiably high adjusted scores.

Measure 02 also has positive correlations in most disciplines with measure 12, an index of university library size, and with measures 13 and 14, which pertain to the level of support for research in a program. Of particular note are the moderately large coefficients in economics for all three of these measures. The correlations of measure 02 with measures 04, 05, 06, and 07 are smaller but still positive in most of the disciplines. From this analysis it is apparent that the number of program graduates tends to be positively correlated with all of the other 15 variables and that the relationship of measure 02 with the other variables tends to be weakest for programs in psychology.

Correlations with Measure 08. Table 10.3 shows the correlation coefficients for measure 08, the mean rating of the scholarly quality of program faculty, with each of the other variables. The correlations of measure 08 with measures of program size (01, 02, and 03) are .40 or greater for all disciplines except psychology. Not surprisingly, the

TABLE 10.2 Correlations of the Number of Program Graduates (Measure 02) with Other Measures, by Discipline

	Anthropology	Economics	Geography	History	Political Science	Psychology	Sociology
Program Size							
01	.69	.61	.48	.77	.56	.65	.55
03	.68	.63	.52	.83	.82	.81	.68
Program Graduates							
04	.23	.36	.09	.34	.23	.10	.31
05	.10	.29	.19	.07	.03	-.15	.18
06	.43	.32	.13	.09	.06	-.06	.19
07	.35	.33	.30	.43	.20	-.06	.32
Survey Results							
08	.71	.75	.60	.74	.60	.31	.72
09	.68	.74	.68	.72	.56	.23	.73
10	-.15	.00	.00	.02	-.04	-.04	-.03
11	.67	.71	.57	.77	.58	.39	.68
University Library							
12	.68	.57	.30	.73	.66	.36	.54
Research Support							
13	.39	.54	.42	N/A	.24	-.04	.46
14	N/A	.52	N/A	N/A	.43	.24	.38
Publication Records							
17	.70	.76	.46	.82	.50	.49	.63
18	.24	.37	.22	.35	.18	-.01	.25

TABLE 10.3 Correlations of the Survey Ratings of Scholarly Quality of Program Faculty (Measure 08) with Other Measures, by Discipline

	Anthropology	Economics	Geography	History	Political Science	Psychology	Sociology
Program Size							
01	.83	.61	.46	.69	.63	.57	.62
02	.71	.75	.60	.74	.60	.31	.72
03	.65	.56	.42	.66	.47	.20	.60
Program Graduates							
04	.49	.42	.36	.63	.64	.64	.51
05	.34	.36	.16	.19	.10	.13	.29
06	.40	.31	.36	.05	.30	.24	.15
07	.50	.48	.51	.54	.52	.74	.47
Survey Results							
09	.96	.98	.98	.98	.98	.97	.98
10	.21	.35	.19	.24	.13	.05	.33
11	.95	.97	.94	.97	.98	.97	.97
University Library							
12	.64	.67	.52	.71	.74	.73	.75
Research Support							
13	.46	.76	.52	N/A	.40	.75	.63
14	N/A	.44	N/A	N/A	.43	.49	.30
Publication Records							
17	.75	.78	.78	.79	.71	.74	.80
18	.26	.47	.59	.53	.44	.57	.49

larger the program, the more likely its faculty is to be rated high in quality. This relationship is especially strong in anthropology, economics, history, and sociology.

Correlations of measure 08 with measure 04, the fraction of students with national fellowship awards, are greater than .60 in history, political science, and psychology and range between .36 and .51 in the other four disciplines. In contrast, for programs in the physical sciences and engineering, the corresponding coefficients (reported in earlier volumes) are considerably smaller. The correlation of rated faculty quality with measure 05, the shortness of time from matriculation in graduate school to award of the doctorate, is positive but small in each of the social and behavioral science disciplines. Correlations of ratings of faculty quality with measure 06, the fraction of program graduates with definite employment plans, are also small but positive in most of the disciplines. In every discipline the correlation of measure 08 is higher with measure 07, the fraction of graduates having agreed to employment at a Ph.D.-granting institution. These coefficients are greater than .70 in psychology and range between .47 and .54 in the other six disciplines.

The correlations of measure 08 with measure 09, the rated effectiveness of doctoral education, are uniformly very high, at or above .96 in every discipline. This finding is consistent with results from the Cartter and Roose-Andersen studies.[6] The coefficients describing the relationship between measure 08 and measure 11, familiarity with the work of program faculty, are also very high, ranging from .94 to .98. In general, evaluators were more likely to have high regard for the quality of faculty in those programs with which they were most familiar. That the correlation coeffients are as large as observed may simply reflect the fact that "known" programs tend to be those that have earned strong reputations.

Correlations of ratings of faculty quality with measure 10, the ratings of perceived improvement in program quality, are below .25 in all disciplines except economics and sociology. One might have expected that a program judged to have improved in quality would have been somewhat more likely to receive high ratings on measure 08 than would a program judged to have declined--thereby imposing a small positive correlation between these two variables.

Correlations ranging from .52 to .75 are observed between measure 08 and measure 12 (university library size). Moderate to high correlations also are found between measure 08 and support for research (measures 13 and 14) and publication records (measures 17 and 18). Of particular note are the strong correlations with measure 17, the total number of published articles by program faculty--ranging from .71 to .80.[7] In all disciplines the correlations with measure 17 are appreciably higher than those with measure 18, the fraction of faculty with one or more articles published during the 1978-80 period.

---

[6] Roose and Andersen, p. 19.

[7] See Appendix J for the correlations of measure 08 with measures 15 and 16 (alternative measures of publication records) in psychology. These coefficients are nearly as high as those found between measures 08 and 17.

Correlations with Measure 14. Correlations of measure 14, reported dollars of support for research and development, with other measures are shown in Table 10.4. (Data on research expenditures in anthropology, geography, and history are not available.) The pattern of relations is quite similar for programs in economics, political science, psychology, and sociology: moderately high correlations with both measures of program size and reputational survey results (except measure 10) and somewhat higher correlations with measure 17, the total number of faculty articles. In interpreting these relationships one must keep in mind the fact that the research expenditure data have not been adjusted for the number of faculty and other staff members involved in research in a program. The correlation with measure 13, which has been adjusted for faculty size, ranges from .28 to .38.

Correlations with Measure 17. Measure 17 is the number of published articles by program faculty during the 1978-80 period. The correlations of this measure with all others appear in Table 10.5. Of particular interest are the high correlations with the reputational survey results (excluding measure 10). Most of those coefficients exceed .70. Measure 17 is positively related to the measures of program size (01, 02, and 03); moderately high correlations are also observed between measure 17 and measures 12 and 14. Also of note are the correlations with measure 07, the fraction of graduates with commitments to take positions in Ph.D.-granting universities. These coefficients range from .34 (in anthropology) to .47 (in sociology).

For psychology programs, data have also been compiled on two alternative measures of publication records--measure 15, the total number of 1978-79 articles attributed to faculty and other program staff, and measure 16, the estimated "overall influence" of these articles. The relationship of these two measures with each of the other measures used in the evaluation of psychology programs is reported in Appendix J. Of particular interest is the correlation of measure 15 with measure 17 since these measures were derived from different sources (see Appendix J) and represent independent estimates of total publication productivity for a program. The coefficient describing the relation of these two measures is as high as .78.

Despite the appreciable correlations between reputational ratings of quality and program size measures, the functional relations between the two probably are complex. If there is a minimum size for a high-quality program, this size is likely to vary from discipline to discipline. Increases in size beyond the minimum may represent more high-quality faculty, or a greater proportion of inactive faculty, or a faculty with heavy teaching responsibilities. In attempting to select among these alternative interpretations, a single correlation coefficient provides insufficient guidance. Nonetheless, certain similarities across disciplines may be seen in the correlations among the measures. High correlations consistently appear among measures 08, 09, and 11 from the reputational survey, and these measures also are prom-

TABLE 10.4 Correlations of the University Research Expenditures in a Discipline (Measure 14) with Other Measures, by Discipline

	Anthropology	Economics	Geography	History	Political Science	Psychology	Sociology
Program Size							
01	N/A	.49	N/A	N/A	.55	.35	.37
02	N/A	.52	N/A	N/A	.43	.24	.38
03	N/A	.45	N/A	N/A	.27	.11	.30
Program Graduates							
04	N/A	.11	N/A	N/A	.32	.29	.31
05	N/A	.25	N/A	N/A	-.12	.05	.10
06	N/A	.18	N/A	N/A	.11	.26	.15
07	N/A	.27	N/A	N/A	.20	.31	.22
Survey Results							
08	N/A	.44	N/A	N/A	.43	.49	.30
09	N/A	.44	N/A	N/A	.39	.53	.37
10	N/A	-.05	N/A	N/A	-.06	-.03	-.18
11	N/A	.38	N/A	N/A	.41	.47	.29
University Library							
12	N/A	.41	N/A	N/A	.40	.45	.25
Research Support							
13	N/A	.29	N/A	N/A	.35	.28	.38
Publication Records							
17	N/A	.54	N/A	N/A	.59	.53	.45
18	N/A	.31	N/A	N/A	.04	.29	.11

TABLE 10.5 Correlations of the Total Number of Articles Published by Faculty (Measure 17) with Other Measures, by Discipline

	Anthropology	Economics	Geography	History	Political Science	Psychology	Sociology
Program Size							
01	.82	.79	.56	.86	.78	.76	.69
02	.70	.76	.46	.82	.50	.49	.63
03	.53	.47	.33	.75	.42	.34	.47
Program Graduates							
04	.14	.32	.23	.39	.34	.35	.33
05	.26	.32	.06	.08	-.04	.12	.36
06	.30	.33	.37	.08	.29	.09	.21
07	.34	.38	.45	.39	.46	.43	.47
Survey Results							
08	.75	.78	.78	.79	.71	.74	.80
09	.72	.75	.77	.77	.70	.71	.82
10	.19	.26	.45	.21	.17	.15	.37
11	.71	.72	.73	.79	.69	.77	.77
University Library							
12	.53	.67	.48	.66	.71	.63	.68
Research Support							
13	.36	.60	.42	N/A	.26	.42	.54
14	N/A	.54	N/A	N/A	.59	.53	.45
Publication Records							
18	.39	.54	.67	.60	.59	.54	.63

inently related to program size (measures 01, 02, and 03), to publication productivity (measure 17), to R&D expenditures (measure 14), and to library size (measure 12). These results show that for all disciplines the reputational rating measures (08, 09, and 11) tend to be associated with program size and with other correlates of size: publication volume, R&D expenditures, and library size. Also, for most disciplines, the reputational measures 08, 09, and 11 tend to be positively related to the availability of fellowship support (measure 04), to the employment prospects of program graduates (especially measure 07), to the fraction of faculty holding research grants (measure 13), and to the fraction who have recently published (measure 18).

ANALYSIS OF THE SURVEY RESPONSE

Measures 08-11, derived from the reputational survey, may be of particular interest to many readers since measures of this type have been the most widely used (and frequently criticized) indices of quality of graduate education. In designing the survey instrument for this assessment the committee made several changes in the form that had been used in the Roose-Andersen study. The modifications served two purposes: to provide the evaluators with a clearer understanding of the programs that they were asked to judge and to provide the committee with supplemental information for the analysis of the survey response. One change was to restrict to 50 the number of programs that any individual was asked to evaluate. Probably the most important change was the inclusion of lists of names and ranks of individual faculty members involved in the research-doctorate programs to be evaluated on the survey form, together with the number of doctoral degrees awarded in the previous five years. Ninety percent of the evaluators were sent forms with faculty names and numbers of degrees awarded; the remaining 10 percent were given forms without this information, so that an analysis could be made of the effect of this modification on survey results. Another change was the addition of a question concerning an evaluator's familiarity with each of the programs. In addition to providing an index of program recognition (measure 11), the inclusion of this question permits a comparison between the ratings furnished by individuals who had considerable familiarity with a particular program and the ratings by those not as familiar with the program. Each evaluator was also asked to identify his or her own institution of highest degree and current field of specialization. This information enables us to compare, for each program, the ratings furnished by alumni of that institution with the ratings by other evaluators, as well as to examine differences in the ratings supplied by evaluators in certain specialty fields.

Before examining factors that may have influenced the survey results, some mention should be made of the distributions of responses to the four survey items and the reliability (consistency) of the ratings. For example, in judging the scholarly quality of faculty (measure 08), survey respondents in each discipline rated between 6 and 8 percent of the programs as being "distinguished" and between 2 and 7 percent as "not sufficient for doctoral education" (see Table 10.6).

TABLE 10.6 Distribution of Responses to Each Survey Item, by Discipline

	Survey Measure	Total	Anthropology	Economics	Geography	History	Political Science	Psychology	Sociology
08	SCHOLARLY QUALITY OF PROGRAM FACULTY								
	Distinguished	7.1	6.5	8.0	7.4	7.9	7.1	6.5	6.7
	Strong	15.8	18.3	12.0	19.8	16.6	16.2	14.5	16.8
	Good	21.3	27.6	17.9	27.4	20.5	25.7	16.6	21.1
	Adequate	18.1	21.4	19.5	20.5	16.7	18.9	14.3	19.7
	Marginal	9.6	8.5	13.4	8.6	8.3	10.5	7.3	11.2
	Not Sufficient for Doctoral Education	4.1	1.9	6.6	4.1	4.6	4.4	2.3	5.1
	Don't Know Well Enough to Evaluate	23.9	15.7	22.6	12.2	25.3	17.2	38.6	19.3
	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
09	EFFECTIVENESS OF PROGRAM IN EDUCATING SCIENTISTS								
	Extremely Effective	7.0	6.4	7.2	9.9	7.1	7.4	5.8	6.7
	Reasonably Effective	27.1	33.0	22.2	40.2	25.8	28.5	22.9	27.0
	Minimally Effective	16.0	17.5	17.9	21.9	15.6	18.5	10.8	15.9
	Not Effective	4.7	3.3	6.8	6.1	3.5	6.5	2.7	5.7
	Don't Know Well Enough to Evaluate	45.3	39.8	45.8	22.0	48.0	39.1	57.9	44.7
	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10	CHANGE IN PROGRAM QUALITY IN LAST FIVE YEARS								
	Better	11.8	12.6	13.8	16.5	10.1	12.9	8.4	12.5
	Little or No Change	27.7	32.0	27.7	41.3	27.1	32.3	19.1	27.2
	Poorer	8.5	11.3	6.1	17.2	7.4	9.3	5.5	9.3
	Don't Know Well Enough to Evaluate	52.0	44.2	52.4	25.1	55.5	45.6	67.0	51.0
	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
11	FAMILIARITY WITH WORK OF PROGRAM FACULTY								
	Considerable	23.8	27.3	23.2	33.7	23.7	25.2	16.7	26.1
	Some	42.8	49.6	41.0	48.2	43.8	47.3	35.6	43.5
	Little or None	32.0	22.5	34.5	17.0	30.5	26.3	46.1	28.8
	No Response	1.5	.7	1.3	1.2	2.0	1.2	1.7	1.7
	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

NOTE: For survey measures 08, 09, 10 the "don't know" category includes a small number of cases for which the respondents provided no response to the survey item.

In evaluating the effectiveness in educating research scholars/scientists, they rated 6-10 percent of the programs as being "extremely effective" and approximately 3-7 percent as "not effective." Of particular interest in this table are the frequencies with which evaluators failed to provide responses to measures 08, 09, and 10. Approximately 24 percent of the total number of evaluations requested for measure 08 were not furnished because survey respondents in the social and behavioral sciences felt that they were not familiar enough with a particular program to evaluate it. In psychology, which had 150 programs included in the assessment, this percentage was nearly 39 percent; in geography, with 49 programs, it was 12 percent. The corresponding percentages of "don't know" responses for measures 09 and 10 are considerably larger--45 and 52 percent, respectively--suggesting that survey respondents found it more difficult (or were less willing) to judge program effectiveness and change than to judge the scholarly quality of program faculty.

The large fractions of "don't know" responses are a matter of some concern. However, given the broad coverage of research-doctorate programs, it is not surprising that faculty members would be unfamiliar with many of the less distinguished programs. As shown in Table 10.7, survey respondents in each discipline were much more likely to furnish evaluations for programs with high reputational standing than they were for programs of lesser distinction. For example, for social and behav-

TABLE 10.7 Survey Item Response Rates, by Discipline and Mean Rating on Measure 08

Survey Measure	Total	Anthropology	Economics	Geography	History	Political Science	Psychology	Sociology
08 SCHOLARLY QUALITY OF PROGRAM FACULTY								
Mean Rating on Measure 08								
4.0 or Higher	96.9	97.3	98.1	98.6	97.4	98.8	92.5	97.7
3.0 - 3.9	90.2	93.2	94.9	94.0	89.2	94.0	82.3	94.2
2.0 - 2.9	77.4	81.2	84.9	88.1	72.6	84.5	61.0	81.8
Less than 2.0	57.9	68.4	63.5	72.9	58.7	65.6	38.9	65.6
09 EFFECTIVENESS OF PROGRAM IN EDUCATING SCIENTISTS								
Mean Rating on Measure 08								
4.0 or Higher	86.3	91.9	89.6	96.1	84.2	90.1	75.5	86.1
3.0 - 3.9	70.0	71.9	74.9	88.4	66.1	74.7	60.6	70.4
2.0 - 2.9	53.2	54.2	57.7	76.3	47.3	57.6	39.8	52.5
Less than 2.0	35.7	39.2	37.7	59.0	36.2	44.0	22.6	38.7
10 CHANGE IN PROGRAM QUALITY IN LAST FIVE YEARS								
Mean Rating on Measure 08								
4.0 or Higher	76.7	83.4	82.0	91.1	73.6	82.1	59.1	78.8
3.0 - 3.9	62.5	68.4	70.0	84.3	59.3	67.3	47.7	64.8
2.0 - 2.9	48.5	50.0	54.0	74.4	41.8	54.4	32.2	48.5
Less than 2.0	28.0	34.3	29.5	55.2	27.0	34.3	16.6	29.9

ioral science programs that received mean ratings of 4.0 or higher on measure 08, almost 97 percent of the evaluations requested on measure 08 were provided; 86 and 77 percent, respectively, were provided on measures 09 and 10. In contrast, the corresponding response rates for programs with mean ratings below 2.0 are much lower--58, 36, and 28 percent response on measures 08, 09, and 10, respectively.

Of great importance to the interpretation of the survey results is the reliability of the response. How much confidence can one have in the reliability of a mean rating reported for a particular program? In the second table in each of the preceding seven chapters, estimated standard errors associated with the mean ratings of every program are presented for all four survey items (measures 08-11). While there is some variation in the magnitude of the standard errors reported in every discipline, they rarely exceed .15 for any of the four measures and typically range from .05 to .10. For programs with higher mean ratings the estimated errors associated with these means are generally smaller--a finding consistent with the fact that survey respondents were more likely to furnish evaluations for programs with high reputational standing. The "split-half" correlations[8] presented in Table 10.8 give an indication of the overall reliability of the survey results in each discipline and for each measure. In the derivation of these correlations individual ratings of each program were randomly divided into two groups (A and B), and a separate mean rating was computed for each group. The last column in Table 10.8 reports the correlations between the mean program ratings of the two groups and is not corrected for the fact that the mean ratings of each group are based on only half rather than a full set of the responses.[9] As the reader will note, the coefficients reported for measure 08, the scholarly quality of program faculty, are in the range of .97 to .98--indicating a very high degree of consistency in evaluators' judgments. The correlations reported for measures 09 and 11, the rated effectiveness of a program and the evaluators' familiarity with a program, are somewhat lower but still at a level of .92 or higher in each discipline. Not surprisingly, the reliability coefficients for ratings of change in program quality in the last five years (measure 10) are considerably lower, ranging from .63 to .94 in the seven social and behavioral science disciplines. While these coefficients represent tolerable reliability, it is quite evident that the responses to measure 10 are not as reliable as the responses to the other three items.

---

[8] For a discussion of the interpretation of "split-half" coefficients, see Robert L. Thorndike and Elizabeth Hagan, Measurement and Evaluation in Psychology and Education, John Wiley & Sons, New York, 1969, pp. 182-185.

[9] To compensate for the smaller sample size the "split-half" coefficient may be adjusted using the Spearman-Brown formula: $r' = 2r/(1 + r)$. This adjustment would have the effect of increasing a correlation of .70, for example, to .82, a correlation of .80 to .89, a correlation of .90 to .95, and a correlation of .95 to .97.

TABLE 10.8 Correlations Between Two Sets of Average Ratings from Two Randomly Selected Groups of Evaluators in the Social Sciences

MEASURE 08: SCHOLARLY QUALITY OF PROGRAM FACULTY

Discipline	Mean Rating		Std. Deviation		Correlation	
	Group A	Group B	Group A	Group B	N	r
Anthropology	2.78	2.75	.79	.78	70	.97
Economics	2.28	2.30	1.20	1.16	93	.98
Geography	2.72	2.77	.88	.89	49	.98
History	2.60	2.62	1.07	1.03	102	.97
Political Science	2.59	2.58	.98	1.01	83	.98
Psychology	2.55	2.54	1.00	1.01	150	.97
Sociology	2.53	2.47	1.04	1.06	92	.98

MEASURE 09: EFFECTIVENESS OF PROGRAM IN EDUCATING SCHOLARS

Discipline	Mean Rating		Std. Deviation		Correlation	
	Group A	Group B	Group A	Group B	N	r
Anthropology	1.62	1.61	.42	.41	70	.94
Economics	1.33	1.33	.63	.64	93	.96
Geography	1.62	1.62	.49	.47	49	.95
History	1.54	1.56	.55	.51	102	.93
Political Science	1.48	1.46	.55	.56	83	.95
Psychology	1.56	1.52	.54	.54	150	.92
Sociology	1.47	1.48	.57	.53	92	.95

MEASURE 10: IMPROVEMENT IN PROGRAM IN LAST FIVE YEARS

Discipline	Mean Rating		Std. Deviation		Correlation	
	Group A	Group B	Group A	Group B	N	r
Anthropology	1.03	1.01	.26	.27	70	.78
Economics	1.13	1.11	.29	.27	93	.84
Geography	.97	1.01	.30	.32	49	.94
History	1.06	1.04	.21	.24	102	.63
Political Science	1.06	1.06	.22	.24	83	.75
Psychology	1.07	1.09	.27	.26	150	.64
Sociology	1.03	1.04	.31	.32	92	.85

MEASURE 11: FAMILIARITY WITH WORK OF PROGRAM FACULTY

Discipline	Mean Rating		Std. Deviation		Correlation	
	Group A	Group B	Group A	Group B	N	r
Anthropology	1.05	1.04	.32	.34	70	.93
Economics	.89	.88	.51	.51	93	.98
Geography	1.18	1.16	.33	.31	49	.93
History	.94	.92	.42	.41	102	.94
Political Science	.99	.99	.41	.42	83	.96
Psychology	.69	.70	.42	.44	150	.96
Sociology	.96	.98	.46	.46	92	.96

Further evidence of the reliability of the survey responses is presented in Table 10.9. As mentioned in Chapter VI of the first volume (mathematical and physical sciences) of the committee's reports, 11 mathematics programs[10] selected at random were included on a second form sent to 178 survey respondents in this discipline, and 116 individuals (65 percent) furnished responses to the second survey. A comparison of the overall results of the two survey administrations (columns 2 and 4 in Table 10.9) demonstrates the consistency of the ratings provided for each of the 11 programs. The average, absolute observed difference in the two sets of mean ratings is less than 0.1 for each measure. Columns 6 and 8 of Table 10.9 report the results based on the responses of only those evaluators who had been asked to consider a particular program in both administrations of the survey. (For a given program approximately 40-45 percent of the 116 respondents to the second survey had been asked to evaluate that program in the prior survey.) It is not surprising to find comparable small differences in the mean ratings provided by this subgroup of evaluators.

Critics of past reputational studies have expressed concern about the credibility of reputational assessments when evaluators provide judgments of programs about which they may know very little. As already mentioned, survey participants in this study were offered the explicit alternative, "Don't know well enough to evaluate." This response option was quite liberally used for measures 08, 09, and 10, as is shown in Table 10.6. In addition, evaluators were asked to indicate their degree of familiarity with each program. Respondents reported "considerable" familiarity with an average of only one program in every four or five. While this finding supports the conjecture that many program ratings are based on limited information, the availability of reported familiarity permits us to analyze how ratings vary as a function of familiarity.

This issue can be addressed in more than one way. It is evident from the data reported in Table 10.10 that mean ratings of the scholarly quality of program faculty tend to be higher if the evaluator has considerable familiarity with the program. There is nothing surprising or, for that matter, disconcerting about such an association. When a particular program fails to provoke more than vague images in the evaluator's mind, he or she is likely to take this as some indication that the program is not an extremely lustrous one on the national scene. While visibility and quality are scarcely the same, the world of research in higher education is structured to encourage high quality to achieve high visibility, so that any association of the two is far from spurious.

From the data presented in Table 10.10 it is evident that if mean ratings were computed on the basis of the responses of only those most familiar with programs, the values reported for individual programs would be increased. A largely independent question is whether a re-

---

[10] Mathematics is the only discipline in which results were obtained from two separate administrations of the survey.

TABLE 10.9 Comparison of Mean Ratings for 11 Mathematics Programs Included in Two Separate Survey Administrations

	Survey Measure	All Evaluators				Evaluators Rating the Same Program in Both Surveys			
		First		Second		First		Second	
		N	$\overline{X}$	N	$\overline{X}$	N	$\overline{X}$	N	$\overline{X}$
Program A	08	100	4.9	114	4.9	50	4.9	50	4.9
	09	90	2.7	100	2.8	42	2.7	43	2.7
	10	74	1.2	83	1.2	38	1.1	34	1.2
	11	100	1.6	115	1.6	50	1.5	50	1.6
Program B	08	94	4.6	115	4.6	48	4.6	50	4.5
	09	81	2.6	91	2.5	40	2.6	39	2.5
	10	69	1.0	82	1.0	37	1.0	36	0.9
	11	98	1.4	116	1.4	50	1.5	50	1.5
Program C	08	86	3.4	103	3.6	42	3.4	44	3.5
	09	56	2.0	66	2.1	28	2.1	29	2.0
	10	55	1.1	62	1.3	30	1.2	27	1.4
	11	99	1.0	116	1.1	50	1.1	50	1.0
Program D	08	74	3.0	93	3.0	37	2.8	38	2.9
	09	50	1.8	48	1.6	27	1.7	16	1.6
	10	46	1.4	52	1.5	24	1.4	23	1.5
	11	90	1.0	113	0.9	46	1.0	46	0.9
Program E	08	69	3.0	95	3.1	39	3.0	46	3.1
	09	40	1.8	60	1.9	25	1.8	30	1.8
	10	36	0.8	58	0.9	24	0.8	29	0.9
	11	96	0.8	115	0.9	52	0.9	52	1.0
Program F	08	63	2.9	90	3.0	26	3.0	32	3.1
	09	35	1.8	46	1.7	10	1.6	13	1.8
	10	32	1.1	43	1.1	11	1.3	12	1.2
	11	95	0.7	115	0.8	43	0.7	44	0.7
Program G	08	69	2.7	92	2.8	39	2.7	39	3.0
	09	35	1.7	45	1.6	17	1.7	19	1.7
	10	36	1.1	43	1.2	17	1.1	19	1.2
	11	85	0.9	116	0.8	46	0.9	46	0.9
Program H	08	58	2.2	73	2.5	36	2.2	37	2.4
	09	32	1.3	43	1.3	22	1.2	19	1.3
	10	30	1.5	39	1.5	20	1.7	17	1.4
	11	90	0.7	116	0.6	51	0.7	52	0.6
Program I	08	55	2.0	74	1.9	30	1.9	30	2.0
	09	33	1.0	41	0.9	19	1.0	18	0.8
	10	27	1.2	31	1.1	15	1.1	13	1.2
	11	99	0.5	115	0.5	50	0.5	50	0.5
Program J	08	51	1.5	67	1.5	26	1.4	28	1.4
	09	31	0.8	36	0.7	14	0.6	14	0.7
	10	26	1.2	23	1.1	14	1.2	12	1.3
	11	96	0.5	113	0.3	49	0.4	48	0.4
Program K	08	33	1.2	48	1.2	17	1.1	21	1.4
	09	19	0.8	21	0.5	11	0.6	8	0.4
	10	12	0.8	15	0.9	5	1.0	5	0.8
	11	99	0.2	114	0.2	48	0.2	47	0.2

TABLE 10.10 Mean Ratings of Scholarly Quality of Program Faculty, by Evaluator's Familiarity with Work of Faculty

	MEAN RATINGS		CORRELATION	
	Considerable	Some/ Little	r	N
Anthropology	3.11	2.61	.92	70
Economics	2.69	2.25	.90	90
Geography	2.96	2.59	.95	49
History	2.85	2.51	.92	102
Political Science	2.90	2.54	.91	81
Psychology	3.03	2.42	.86	148
Sociology	2.96	2.37	.91	91

NOTE: N reported in last column represents the number of programs with a rating from at least one evaluator in each of the two groups.

striction of this kind would substantially change our sense of the relative standings of programs on this measure. Quite naturally, the answer depends in some degree on the nature of the restriction imposed. For example, if we exclude evaluations provided by those who confessed "little or no" familiarity with particular programs, then the revised mean ratings would be correlated at a level of at least .99 with the mean ratings computed using all of the data. (This similarity arises, in part, because only a small fraction of evaluations are given on the basis of no more than "little" familiarity with the program.)

The third column in Table 10.10 presents the correlation in each discipline between the array of mean ratings supplied by respondents claiming "considerable" familiarity and the mean ratings of those indicating "some" or "little or no" familiarity with particular programs. This coefficient is a rather conservative estimate of agreement since there is not a sufficient number of ratings from those with "considerable" familiarity to provide highly stable means. Were more such ratings available, one might expect the correlations to be higher. However, even in the form presented, the correlations, which are at least .90 in all disciplines except psychology, are high enough to suggest that the relative standing of programs on measure 08 is not greatly affected by the admixtures of ratings from evaluators who recognize that their knowledge of a given program is limited.

As mentioned previously, 90 percent of the survey sample members were supplied the names of faculty members associated with each program to be evaluated, along with the reported number of program graduates (Ph.D. or equivalent degrees) in the previous five years. Since earlier reputational surveys had not provided such information, 10 percent of the sample members, randomly selected, were given forms without faculty names or doctoral data, as a "control group." As one might

TABLE 10.11 Item Response Rate on Measure 08, by Selected Characteristics of Survey Evaluators in the Social Sciences

	Total	Anthropology	Economics	Geography	History	Political Science	Psychology	Sociology
EVALUATOR'S FAMILIARITY WITH PROGRAM								
Considerable	99.9	99.9	99.9	100.0	100.0	99.9	100.0	99.9
Some	97.4	98.8	97.2	98.3	96.4	99.0	96.3	96.6
Little or None	31.8	34.8	40.0	37.1	27.0	39.2	22.0	41.5
TYPE OF SURVEY FORM								
Names	77.2	85.4	79.1	87.9	75.6	84.1	62.7	81.6
No Names	66.4	75.6	59.5	87.2	67.0	70.9	50.1	71.9
INSTITUTION OF HIGHEST DEGREE								
Alumni	98.9	100.0	98.8	98.9	100.0	98.8	97.7	98.8
Nonalumni	75.8	84.1	77.2	87.6	74.4	82.6	61.2	80.5
EVALUATOR'S PROXIMITY TO PROGRAM								
Same Region	83.7	89.8	81.9	94.1	83.1	88.0	73.0	88.3
Outside Region	74.9	83.4	76.7	86.8	73.4	82.0	59.8	79.6

NOTE: The item response rate is the percentage of the total ratings requested from survey participants that included a response other than "don't know."

expect, those given faculty names were more likely than other survey respondents to provide evaluations of the scholarly quality of program faculty (see Table 10.11), although the differences found were not large. (The reader may recall that the provision of faculty names apparently had little effect on survey sample members' willingness to complete and return their questionnaires.[11])

In all disciplines except anthropology, the mean ratings provided by the group furnished faculty names are lower than the mean ratings supplied by other respondents (see Table 10.12). Although the differences are small, they attract attention because they are consistent with findings in the mathematical and physical sciences, humanities, engineering, and biological sciences and because the direction of the differences was not anticipated. After all, those programs more familiar to evaluators tended to receive higher ratings, yet when steps were taken to enhance the evaluator's familiarity, the resulting ratings are somewhat lower. One _post hoc_ interpretation of this finding is that a program may be considered to have distinguished faculty if even only a few of its members are considered by the evaluator to be outstanding in their field. However, when a full list of program faculty is provided, the evaluator may be influenced by the number of individuals whom he or she could not consider to be distinguished. Thus, the presentation of these additional, unfamiliar names may occasionally result in a lower rating of program faculty.

---

[11] See Table 2.3.

However interesting these effects may be, one should not lose sight of the fact that they are small at best and that their existence does not necessarily imply that a program's relative standing on measure 08 would differ much whichever type of survey form was used. Since only about 1 in 10 ratings was supplied without the benefit of faculty names, it is hard to establish any very stable picture of relative mean ratings of individual programs. However, the correlations between the mean ratings supplied by the two groups are reasonably high--ranging from .82 in psychology to .96 in geography (see Table 10.12). Were these coefficients adjusted for the fact that the group furnished forms without names constituted only about 10 percent of the survey respondents, they would be substantially larger. From this result it seems reasonable to conclude that differences in the alternative survey forms used are not likely to be responsible for any large-scale reshuffling in the reputational ranking of programs on measure 08. It also suggests that the inclusion of faculty names in the committee's assessment need not prevent comparisons of the results with those obtained from the Roose-Andersen survey.

Another factor that might be thought to influence an evaluator's judgment about a particular program is the geographic proximity of that program to the evaluator. There is enough regional traffic in academic life that one might expect proximate programs to be better known than those in distant regions of the country. This hypothesis may apply especially to the smaller and less visible programs and is confirmed

TABLE 10.12 Mean Ratings of Scholarly Quality of Program Faculty, by Type of Survey Form Provided to Evaluator

	MEAN RATINGS		CORRELATION	
	Names	No Names	r	N
Anthropology	2.79	2.56	.89	70
Economics	2.29	2.30	.95	93
Geography	2.74	2.78	.96	49
History	2.61	2.62	.90	102
Political Science	2.57	2.82	.90	83
Psychology	2.55	2.70	.82	146
Sociology	2.46	2.90	.91	92

NOTE: N reported in last column represents the number of programs with a rating from at least one evaluator in each of the two groups.

TABLE 10.13 Mean Ratings of Scholarly Quality of Program Faculty, by Evaluator's Proximity to Region of Program

	MEAN RATINGS		CORRELATION	
	Nearby	Outside	r	N
Anthropology	2.74	2.77	.89	68
Economics	2.34	2.31	.96	91
Geography	2.82	2.73	.89	48
History	2.73	2.60	.96	101
Political Science	2.61	2.59	.95	81
Psychology	2.59	2.54	.90	149
Sociology	2.59	2.52	.95	90

NOTE: N reported in last column represents the number of programs with a rating from at least one evaluator in each of the two groups.

by the survey results. For purposes of analysis, programs were assigned to one of nine geographic regions[12] in the United States, and ratings of programs within an evaluator's own region are categorized in Table 10.13 as "nearby." Ratings of programs in any of the other eight regions were put in the "outside" group. Findings reported elsewhere in this chapter confirm that evaluators were more likely to provide ratings if a program was within their own region of the country,[13] and it is reasonable to imagine that the smaller and the less visible programs received a disproportionate share of their ratings either from evaluators within their own region or from others who for one reason or another were particularly familiar with programs in that region.

Although the data in Table 10.13 suggest that "nearby" programs were given higher ratings than those outside the evaluator's region (except in anthropology), the differences in reported means are quite small and probably represent no more than a secondary effect that might be expected, because, as we have already seen, evaluators tended to rate higher those programs with which they were more familiar. Furthermore, the high correlations found between the mean ratings of the two groups indicate that the relative standings of programs are not dramatically influenced by the geographic proximity of those evaluating them.

Another consideration that troubles some critics is that large programs may be unfairly favored in a faculty survey because they are

---

[12] See Appendix I for a list of the states included in each region.
[13] See Table 10.11.

TABLE 10.14 Mean Ratings of Scholarly Quality of Program Faculty, by Evaluator's Institution of Highest Degree

	MEAN RATINGS		NUMBER OF PROGRAMS WITH ALUMNI RATINGS
	Alumni	Nonalumni	N
Anthropology	3.89	3.40	26
Economics	3.47	3.14	36
Geography	3.66	3.15	28
History	4.05	3.46	32
Political Science	3.76	3.38	31
Psychology	4.13	3.40	42
Sociology	3.97	3.33	34

NOTE: The pairs of means reported in each discipline are computed for a subset of programs with a rating from at least one alumnus and are substantially greater than the mean ratings for the full set of programs in each discipline.

likely to have more alumni contributing to their ratings who, it would stand to reason, would be generous in the evaluations of their alma maters. Information collected in the survey on each evaluator's institution of highest degree enables us to investigate this concern. The findings presented in Table 10.14 support the hypothesis that alumni provided generous ratings--with differences in the mean ratings (for measure 08) of alumni and nonalumni ranging from .33 to .73 in the seven disciplines. Given the appreciable differences between the ratings furnished by program alumni and other evaluators, one might ask how much effect this has had on the overall results of the survey. The answer is "very little." As shown in the table, in history and psychology fewer than one program in every three received ratings from any alumnus; in geography slightly more than half of the programs were evaluated by one or more alumni.[14] Even in the latter discipline, however, the fraction of alumni providing ratings of a program is always quite small and should have had minimal impact on the overall mean rating of any program. To be certain that this was the case, mean ratings of the scholarly quality of faculty were recalculated for every social and behavioral science program--with the evaluations provided by alumni excluded. The results were compared with the mean scores based on a full set of evaluations. Out of the 639 social and behavioral science programs evaluated in the survey, none of the programs had an observed difference as large as 0.2, and for 593 programs (93 percent) their mean ratings remain unchanged (to the nearest tenth of a unit). On the basis of these findings the committee saw no reason to exclude alumni ratings in the calculation of program means.

---

[14] Because of the small number of alumni ratings in every discipline, the mean ratings for this group are unstable and therefore the correlations between alumni and nonalumni mean ratings are not reported.

Another concern that some critics have is that a survey evaluation may be affected by the interaction of the research interests of the evaluator and the area(s) of focus of the research-doctorate program to be rated. It is said, for example, that some narrowly focused programs may be strong in a particular area of research but that this strength may not be recognized by a large fraction of evaluators who happen to be unknowledgeable in this area. This is a concern more difficult to address than those discussed in the preceding pages since little or no information is available about the areas of focus of the programs being evaluated (although in certain disciplines the title of a department or academic unit may provide a clue). To obtain a better understanding of the extent to which an evaluator's field of specialty may have influenced the ratings he or she has provided, an analysis was made of ratings provided by evaluators in psychology. Survey participants in this discipline were divided into two groups according to specialty field (as reported on the survey questionnaire): those specializing in clinical psychology or counseling and guidance and those in the other fields of psychology. The mean ratings of the two groups are reported in Table 10.15. The program ratings provided by clinical psychologists are, on the average, slightly higher than those provided by evaluators in nonclinical areas. Despite these differences there is a high degree of correlation in the mean ratings furnished by the two groups (r = .91). Although one cannot conclude from these findings that an evaluator's specialty field has no bearing on how he or she rates a program, these findings do suggest that the relative standings of programs in psychology would not be greatly altered if the ratings by either group were discarded. Similar findings, presented in the mathematical and physical sciences volume of the committee's report, were obtained from an analysis of survey evaluators in differing specialties within physics and within statistics/biostatistics.

TABLE 10.15 Mean Ratings of Scholarly Quality of Program Faculty, by Evaluator's Field of Specialty within Psychology

	MEAN RATINGS		CORRELATION	
	Clinical	Other	r	N
Psychology	2.63	2.52	.91	150

NOTE: N reported in last column represents the number of programs with a rating from at least one evaluator in each of the two groups.

INTERPRETATION OF REPUTATIONAL SURVEY RATINGS

It is not hard to foresee that results from this survey will receive considerable attention through enthusiastic and uncritical reporting in some quarters and sharp castigation in others. The study committee understands the grounds for both sides of this polarized response but finds that both tend to be excessive. It is important to make clear how we view these ratings as fitting into the larger study of which they are a part.

The reputational results are likely to receive a disproportionate degree of attention for several reasons, including the fact that they reflect the opinions of a large group of faculty colleagues and that they form a bridge with earlier studies of graduate programs. But the results will also receive emphasis because they alone, among all of the measures, seem to address quality in an overall or global fashion. While most recognize that "objective" program characteristics (i.e., publication productivity, research funding, or library size) have some bearing on program quality, probably no one would contend that a single one of these measures encompasses all that need be known about the quality of research-doctorate programs. Each is obviously no more than an indicator of some aspect of program quality. In contrast, the reputational ratings are global from the start because the respondents are asked to take into account many objective characteristics and to arrive at a general assessment of the quality of the faculty and the effectiveness of the program. This generality has self-evident appeal.

On the other hand, it is wise to keep in mind that these reputational ratings are measures of perceived program quality rather than of "quality" in some ideal or absolute sense. What this means is that, just as for all of the more objective measures, the reputational ratings represent only a partial view of what most of us would consider quality to be; hence, they must be kept in careful perspective.

Some critics may argue that such ratings are positively misleading because of a variety of methodological artifacts or because they are supplied by "judges" who often know very little about the programs they are rating. The committee has conducted the survey in a way that permits the empirical examination of a number of the alleged artifacts and, although our analysis is by no means exhaustive, the general conclusion is that their effects are slight.

Among the criticisms of reputational ratings from prior studies are some that represent a perspective that may be misguided. This perspective assumes that one asks for ratings in order to find out what "quality" really is and that to the degree that the ratings miss the mark of "quintessential quality," they are unreal, although the quality that they attempt to measure is real. What this perspective misses is the reality of quality and the fact that impressions of quality, if widely shared, have an imposing reality of their own and therefore are worth knowing about in their own right. After all, these perceptions govern a large-scale system of traffic around the nation's graduate institutions--for example, when undergraduate students seek the advice of professors concerning graduate programs that they might attend. It is possible that some professors put in this position disqualify themselves on grounds that they are not well informed about the relative merits of the programs being considered. Most faculty members, however, surely attempt to be helpful on the basis of impressions gleaned from their professional experience, and these assessments are likely to have major impact on student decision-making. In short, the impressions are real and have very real effects not only on students shopping for graduate schools but also on other flows, such as jobseeking young faculty and the distribution of research resources. At the very least, the survey results provide a snapshot of these impressions from discipline to discipline. Although these impressions may be far from ideally informed, they certainly show a strong degree of consensus within each discipline, and it seems safe to assume that they are more than passingly related to what a majority of keen observers might agree program quality is all about.

COMPARISON WITH RESULTS OF THE ROOSE-ANDERSEN STUDY

An analysis of the response to the committee's survey would not be complete without comparing the results with those obtained in the survey by Roose and Andersen 12 years earlier. Although there are obvious similarities in the two surveys, there are also some important differences that should be kept in mind in examining individual program ratings of the scholarly quality of faculty. Already mentioned in this chapter is the inclusion, on the form sent to 90 percent of the sample members in the committee's survey, of the names and academic ranks of faculty and the numbers of doctoral graduates in the previous five years. Other significant changes in the committee's form are the identification of the university department or academic unit in which each program may be found, the restriction of requesting evaluators to make judgments about no more than 50 research-doctorate programs in their discipline, and the presentation of these programs in random sequence on each survey form. The sampling frames used in the two surveys also differ. The sample selected in the earlier study included only individuals who had been nominated by the participating universities, while more than one-fourth of the sample in the committee's survey were chosen at random from full faculty lists. (Except for this difference the samples were quite similar--i.e., in terms of the number of evaluators in each discipline and the fraction of senior scholars.[15])

Several dissimilarities in the coverage of the Roose-Andersen and this committee's reputational assessments should be mentioned. The former included a total of 130 institutions that had awarded at least 100 doctoral degrees in two or more disciplines during the FY1958-67 period. The institutional coverage in the committee's assessment was based on the number of doctorates awarded in each discipline (as described in Chapter I) and covered a total population of 228 universities. Most of the universities represented in the present study but not the earlier one are institutions that offered research-doctorate programs in a limited set of disciplines. In the Roose-Andersen study, programs in the same seven social and behavioral science disciplines were rated: anthropology, economics, geography, history, political science, psychology, and sociology. Finally, in the Roose-Andersen study only one set of ratings was compiled from each institution represented in a discipline, whereas in the committee's survey separate ratings were requested if a university offered more than one research-doctorate program in a given discipline. The consequences of these differences in survey coverage are quite apparent: in the committee's survey, evaluations were requested for a total of 639 research-doctorate programs in the social and behavioral sciences, compared with 515 programs in the Roose-Andersen study.

---

[15] For a description of the sample group used in the earlier study, see Roose and Andersen, pp. 28-31.

Figures 10.1-10.7 plot the mean ratings of scholarly quality of faculty in programs included in both surveys; sets of ratings are graphed for 38 programs in anthropology, 71 in economics, 31 in geography, 79 in history, 61 in political science, 103 in psychology, and 65 in sociology. Since in the Roose-Andersen study programs were identified by institution and discipline (but not by department), the matching of results from this survey with those from the committee's survey is not precise. For universities represented in the latter survey by more than one program in a particular discipline, the mean rating for the program with the largest number of graduates (measure 02) is the only one plotted here. Although the results of both surveys are reported on identical scales, some caution must be taken in interpreting differences in mean ratings a program received in the two evaluations. It is impossible to estimate what effect all of the differences described above may have had on the results of the two surveys. Furthermore, one must remember that the reported scores are based on the opinions of different groups of faculty members and were provided at different time periods. In 1969, when the Roose-Andersen survey was conducted, graduate departments in most universities were still expanding and not facing the enrollment and budget reductions that many departments have had to deal with in recent years. Consequently, a comparison of the overall findings from the two surveys tells us nothing about how much graduate education has improved (or declined) in the past decade. Nor should the reader place much stock in any small differences in the mean ratings that a particular program may have received in the two surveys. On the other hand, it is of particular interest to note the high correlations between the results of the evaluations. For programs in anthropology, economics, history, political science, and psychology, the correlation coefficients range between .90 and .94; in geography and sociology the coefficients are .79 and .86, respectively. The extraordinarily high correlations found in five of the seven disciplines may suggest to some readers that reputational standings of programs in these disciplines have changed very little in the last decade. However, differences are apparent for some institutions. Also, one must keep in mind that the correlations are based on the reputational ratings of only 70 percent of the programs evaluated in this assessment in these disciplines and do not take into account the emergence of many new programs that did not exist or were too small to be rated in the Roose-Andersen study.

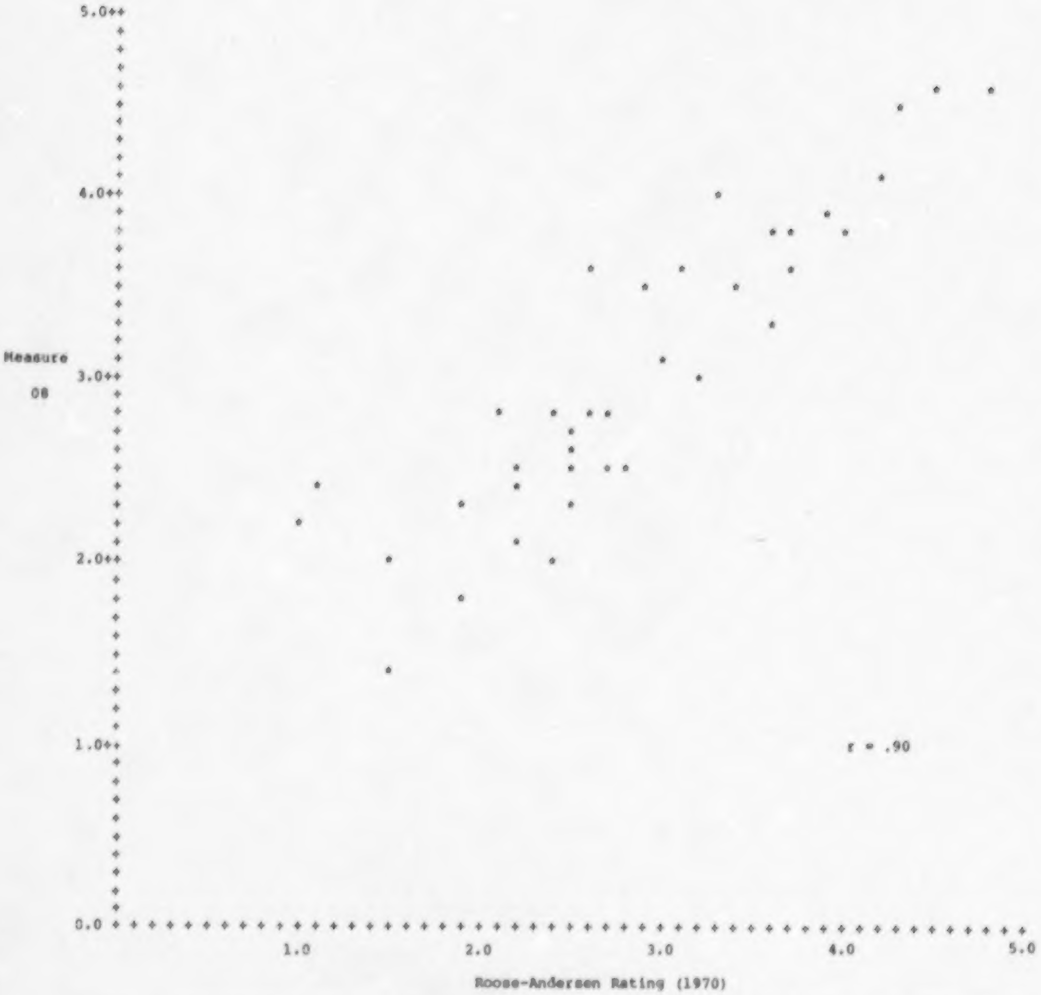


FIGURE 10.1 Mean rating of scholarly quality of faculty (measure 08) versus mean rating of faculty in the Roose-Andersen study--38 programs in anthropology.

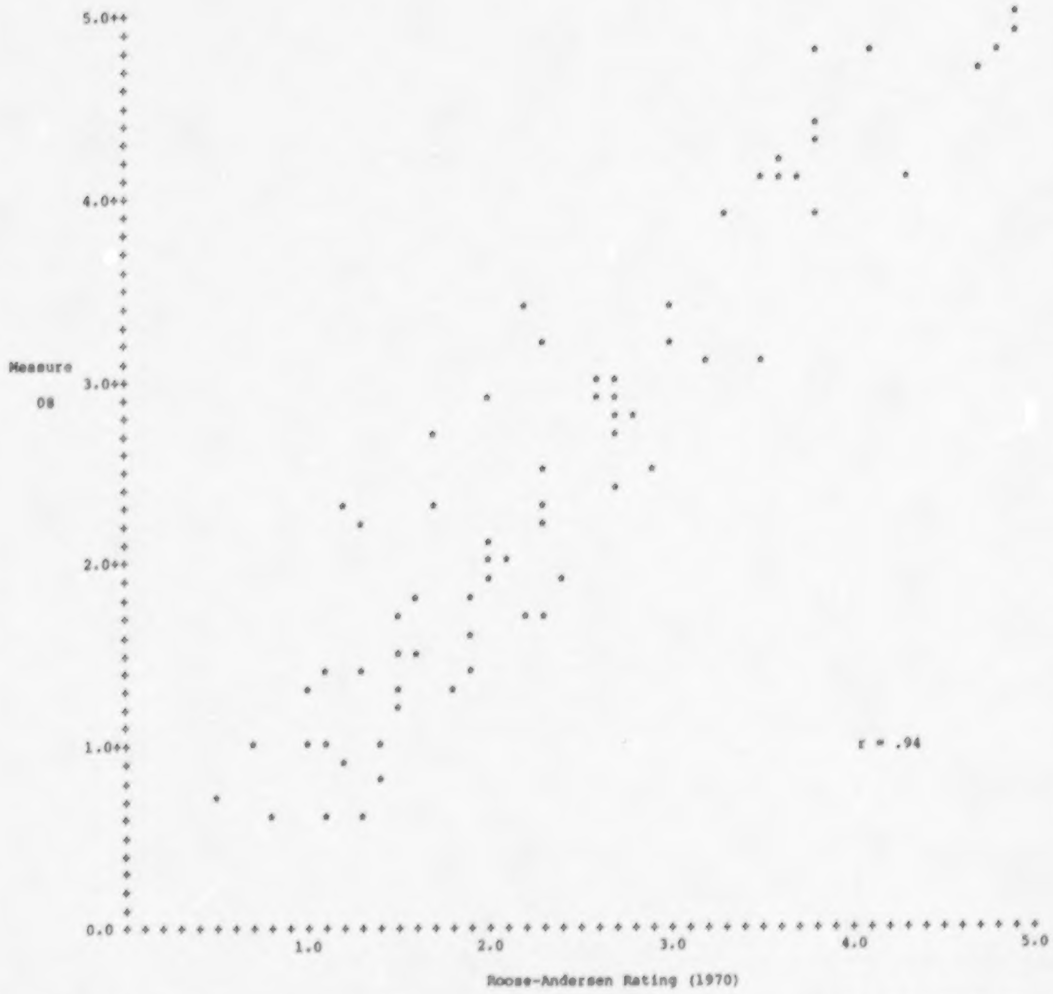


FIGURE 10.2 Mean rating of scholarly quality of faculty (measure 08) versus mean rating of faculty in the Roose-Andersen study--71 programs in economics.

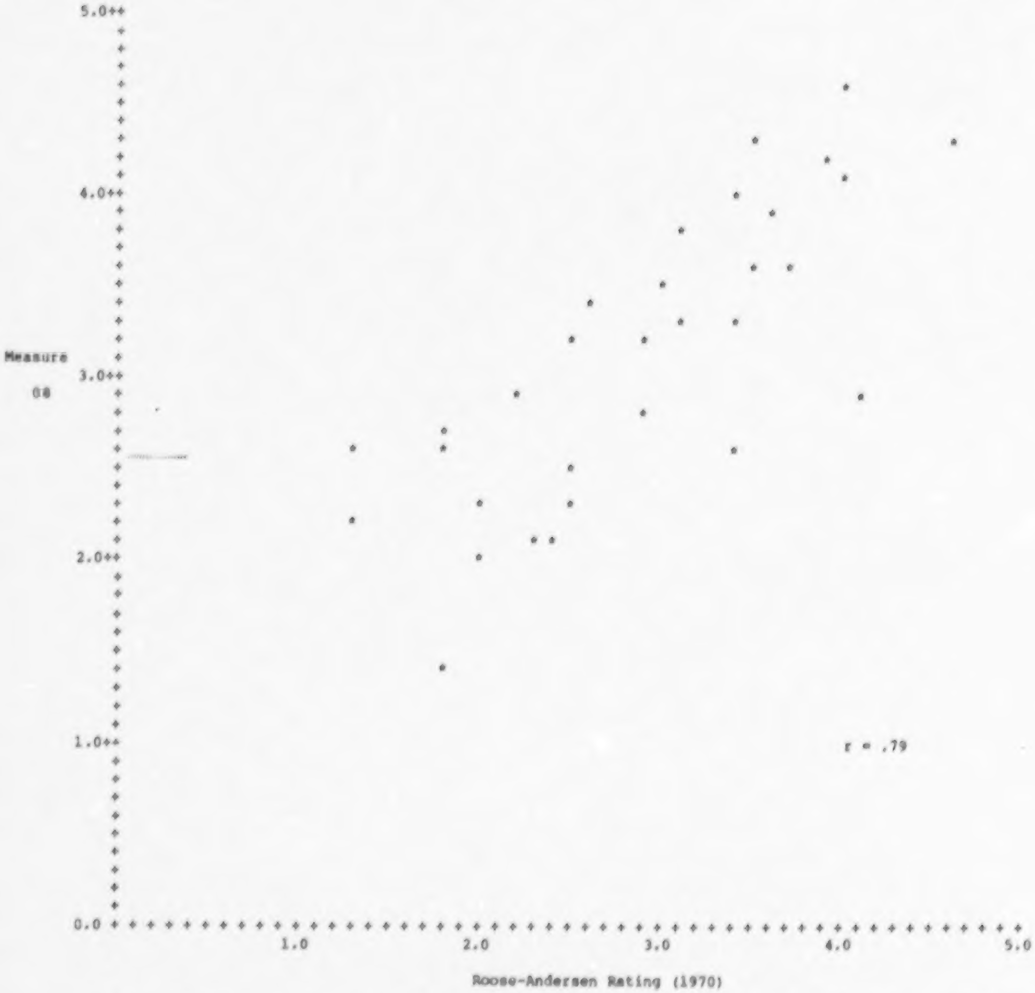


FIGURE 10.3 Mean rating of scholarly quality of faculty (measure 08) versus mean rating of faculty in the Roose-Andersen study--31 programs in geography.

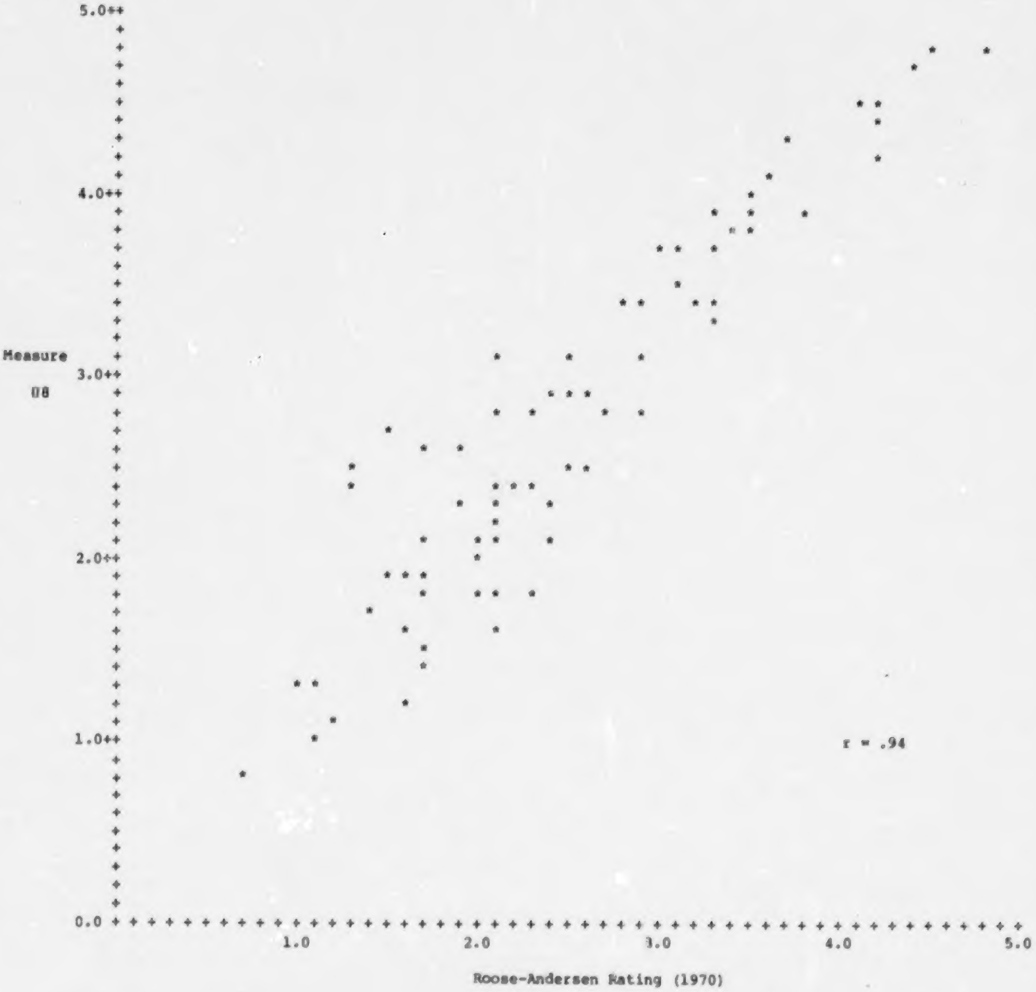


FIGURE 10.4 Mean rating of scholarly quality of faculty (measure 08) versus mean rating of faculty in the Roose-Andersen study--79 programs in history.

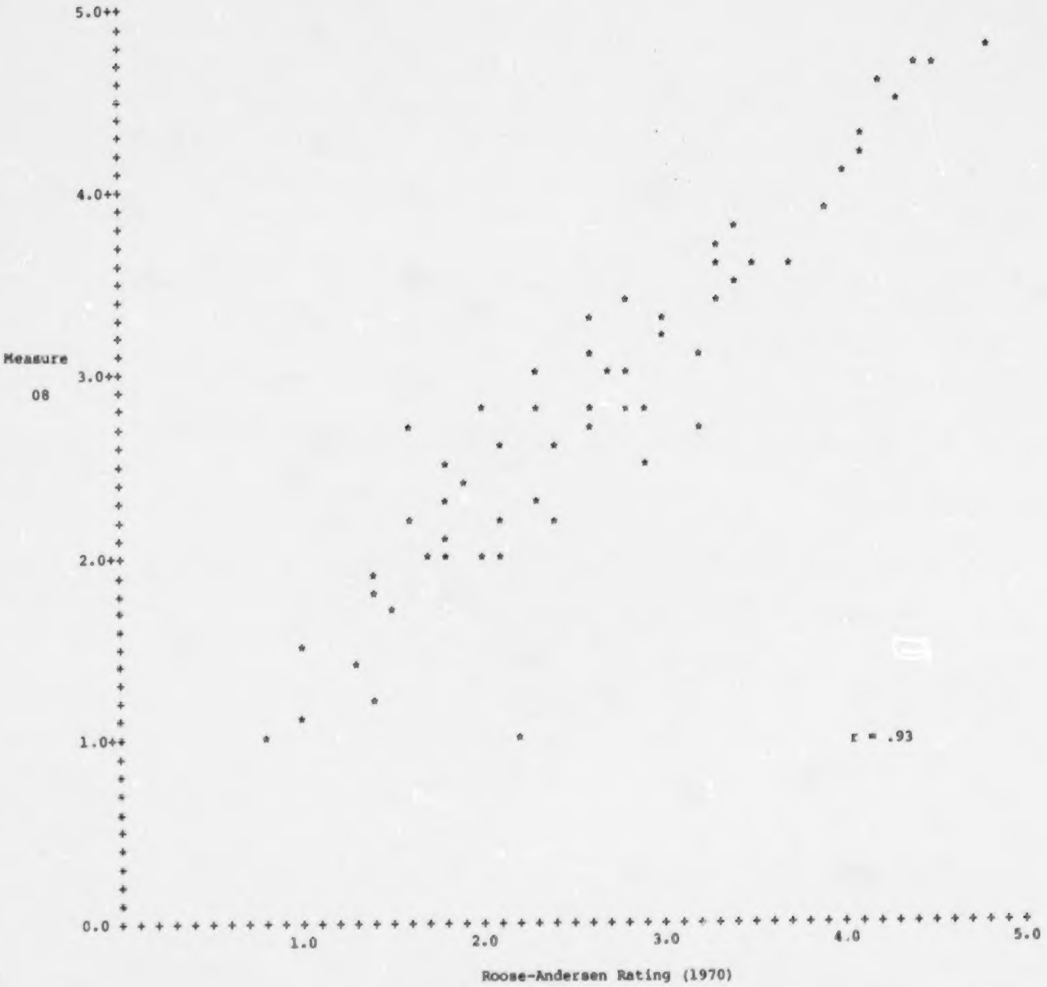


FIGURE 10.5 Mean rating of scholarly quality of faculty (measure 08) versus mean rating of faculty in the Roose-Andersen study--61 programs in political science.

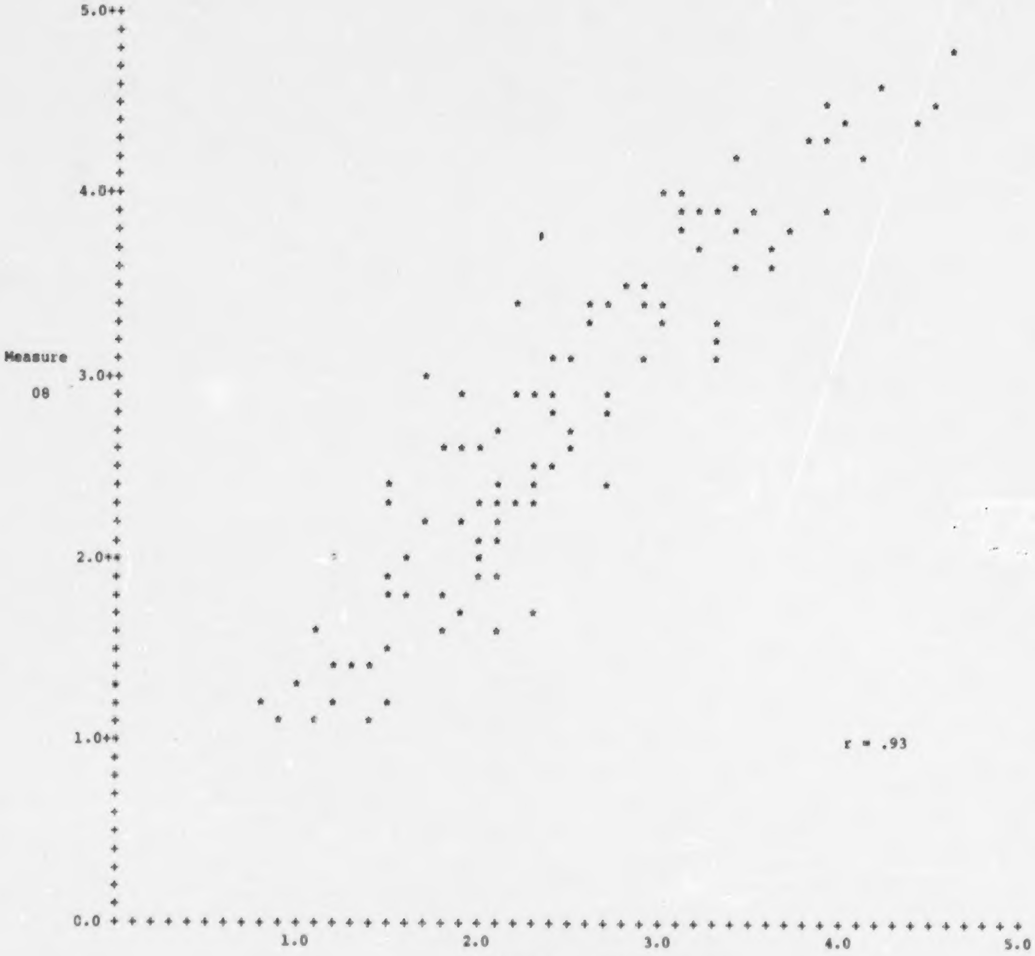


FIGURE 10.6 Mean rating of scholarly quality of faculty (measure 08) versus mean rating of faculty in the Roose-Andersen study--103 programs in psychology.

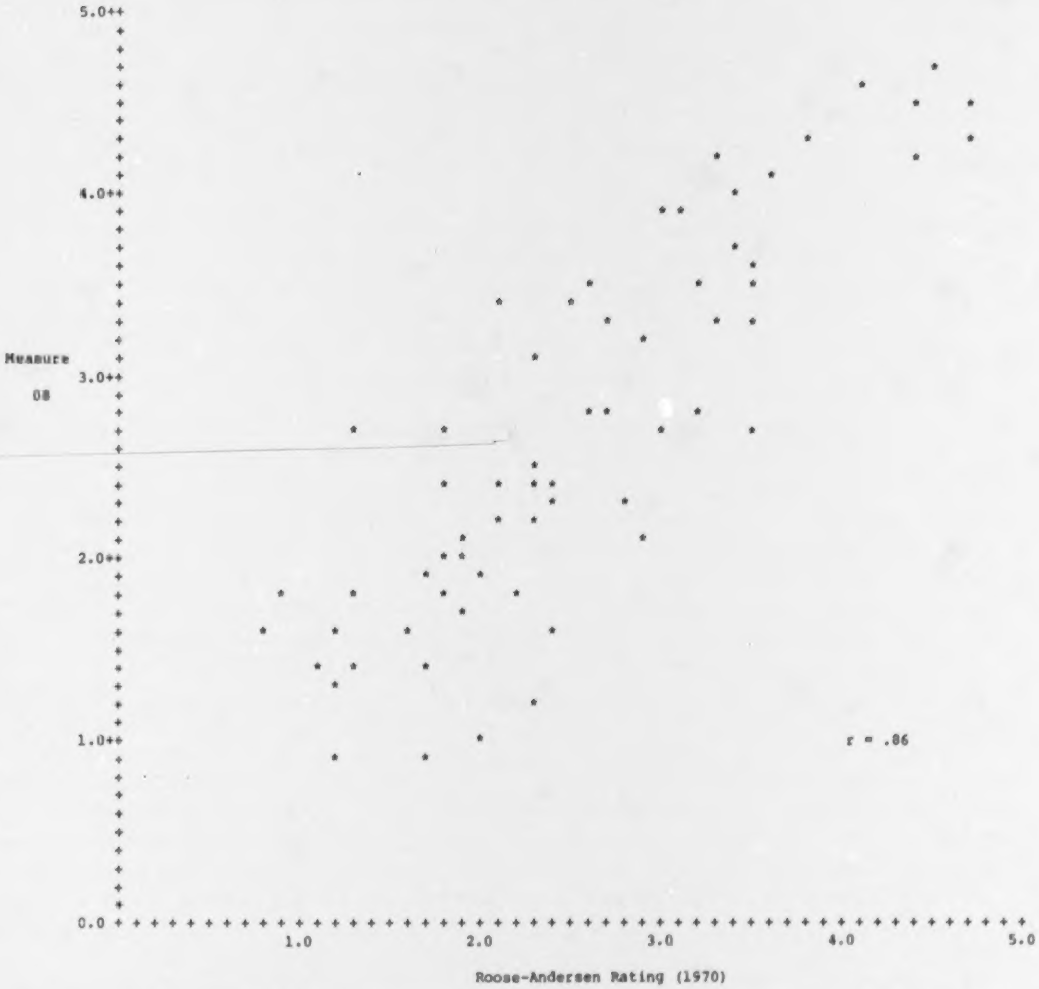


FIGURE 10.7 Mean rating of scholarly quality of faculty (measure 08) versus mean rating of faculty in the Roose-Andersen study--65 programs in sociology.

FUTURE STUDIES

One of the most important objectives in undertaking this assessment was to test new measures not used extensively in past evaluations of graduate programs. Although the committee believes that it has been successful in this effort, much more needs to be done. First and foremost, studies of this kind should be extended to cover other types of programs and other disciplines not included in this effort. As a consequence of budgeting limitations, the committee had to restrict its study to 32 disciplines, selected on the basis of the number of doctorates awarded in each. A multidimensional assessment of research-doctorate programs in many important disciplines not included among these 32 should be of great value to the academic community. Consideration should also be given to embarking on evaluations of programs offering other types of graduate and professional degrees. As a matter of fact, plans for including master's-degree programs in this assessment were originally contemplated, but because of a lack of available information about the resources and graduates of programs at the master's level, it was decided to focus on programs leading to the research doctorate.

Perhaps the most debated issue the committee has had to address concerned which measures should be reported in this assessment. In fact, there is still disagreement among some of its members about the relative merits of certain measures, and the committee fully recognizes a need for more reliable and valid indices of the quality of graduate programs. First on a list of needs is more precise and meaningful information about the product of research-doctorate programs--the graduates. For example, what fraction of the program graduates have gone on to be productive investigators--either in the academic setting or in government and industrial laboratories? What fraction have gone on to become outstanding investigators--as measured by receipt of major prizes, membership in academies, and other such distinctions? How do program graduates compare with regard to their publication records? Also desired might be measures of the quality of the students applying for admittance to a graduate program (e.g., Graduate Record Examination scores, undergraduate grade point averages). If reliable data of this sort were made available, they might provide a useful index of the reputational standings of programs, from the perspective of graduate students.

A number of alternative measures relevant to the quality of program faculty were considered by the committee but not included in the assessment because of the associated difficulties and costs of compiling the necessary data. For example, what fraction of the program faculty were invited to present papers at national meetings? What fraction had been elected to prestigious organizations/groups in their field? What fraction had received senior fellowships and other awards of distinction? In addition, it would be highly desirable to supplement the data presented on NSF, NIH, and ADAMHA research grant awards (measure 13) with data on awards from other federal agencies as well as from major private foundations.

As described in the preceding pages, the committee was able to make several changes in the survey design and procedures, but further improvements could be made. Of highest priority in this regard is the expansion of the survey sample to include evaluators from outside the academic setting. To add evaluators from nonacademic sectors would require a major effort in identifying the survey population from which a sample could be selected. Although such an effort is likely to involve considerable costs in both time and financial resources, the committee believes that the addition of evaluators from nonacademic settings would be of value in providing a different perspective to the reputational assessment and that comparisons between the ratings supplied by academic and nonacademic evaluators would be of particular interest.

Minority Statement

The inclusion of several different and independent possible measures reflecting the quality of graduate education in this report seems to us a substantial addition and a significant improvement to the previous such studies. However, we are concerned with the possibility that there are perhaps too many measures, some of which have little or no bearing on the objectives of the present study. In particular, measures 06 and 07 (on the employment plans of graduates) are not informative, have little or nothing to do with the quality of the program, and yield numbers that are not very dependable. Both measures come from data in the NRC's Survey of Earned Doctorates. Measure 06, the fraction of FY1975-79 program graduates with definite employment or study plans at time of doctorate, is vague because the "time of doctorate" may vary considerably from the time of year when, say, academic appointments are offered--and this in turn can vary substantially among institutions. This measure may be associated with the prosperity of the program, but its connection with quality is tenuous. Measure 07, the fraction of FY1975-79 program graduates planning to take positions in Ph.D.-granting universities, is even more nebulous. What is meant by "planning"? How firm are those plans? (We can't know; all there is is a check somewhere on a questionnaire.) What about the variation in quality among different Ph.D.-granting universities? It can be considerable, and such considerable differences are precisely those the whole study is attempting to measure. Such data obscure the differences. Further, measure 07 betrays the inherent bias of the present study and previous ones in that the "program graduates planning to take positions in Ph.D.-granting universities" is tacitly offered as a measure of the "goodness" of the program. In the late 1970's and 1980's nothing can be farther from the truth. The kindest evaluation of measures 06 and 07 is that they are irrelevant.

These two measures do not result from careful plans made by the committee for this study in order to find other useful new measures. Such plans were considered, but for various good reasons could not be carried out. These two particular measures just happen to be available in the vast data collected and recorded (but not critically evaluated) over the years by the Commission on Human Resources of the National Research Council. Their inclusion in this report might be explained by bureaucratic inertia, but this inclusion adds nothing to the report.

SAUNDERS MAC LANE

C. K. N. PATEL

ERNEST S. KUH

Appendixes

APPENDIX A

LETTER TO INSTITUTIONAL COORDINATORS

COMMITTEE ON AN ASSESSMENT OF QUALITY-RELATED CHARACTERISTICS
OF RESEARCH-DOCTORATE PROGRAMS IN THE UNITED STATES

Established by the Conference Board of Associated Research Councils

Office of the Staff Director / National Research Council / 2101 Constitution Avenue, N.W. / Washington, D.C. 20418

(202) 389-6552

December 5, 1980

Dear

We are pleased to learn that you have been designated to coordinate the efforts of your institution in assisting our committee with an assessment of the characteristics and effectiveness of research-doctorate programs in U.S. universities. A prospectus describing the goals and procedures for this study has already been distributed to university presidents and graduate deans. The cooperation of universities and their faculties is essential for the assessment to be carried out in an objective and accurate fashion.

The study is being conducted under the aegis of the Conference Board of Associated Research Councils and is housed administratively within the National Research Council. Financial support has been provided by the Andrew W. Mellon Foundation, the Ford Foundation, the National Science Foundation, and the National Institutes of Health. The study will examine more than 2,600 programs in 31 fields in the physical sciences, engineering, life sciences, social sciences, and humanities. Approximately 10,000 faculty members will be asked to evaluate programs in their own fields. In addition to the reputational evaluations by faculty, information will be compiled from national data banks on the achievements of both the faculty involved in each program and the program graduates.

The product of this study will be a series of reports with descriptive data on institutional programs in each of 31 fields to be covered. These reports will present several different measures of the quality-related characteristics of each program being evaluated. Some of the measures will be adjusted for program size. With the cooperation of your institution and that of other universities, we plan to produce these reports by late spring of 1982. At that time the detailed data that have

COMMITTEE MEMBERS

Lyle V. Jones, Co-Chairman
Gardner Lindzey, Co-Chairman
Paul A. Albrecht
Marcus Alexis
Robert M. Bock
Philip E. Converse
James H. M. Henderson
Ernest S. Kuh
Winfred P. Lehmann
Saunders Mac Lane
Nancy S. Milburn
Lincoln E. Moses
James C. Olson
Kumar Patel
Michael J. Pelczar, Jr.
Jerome B. Schneewind
Duane C. Spriestersbach
Harriet A. Zuckerman

been compiled on research-doctorate programs within your institution will be made available to you for a nominal cost. These data should prove to be quite valuable for an assessment of the particular strengths and weaknesses of individual programs at your institution.

For the past three months the committee has deliberated over what fields are to be covered in the study and which programs within each field are to be evaluated. The financial resources available limit us to an assessment of approximately 2,600 programs in 31 fields. The fields to be included have been determined on the basis of the total number of doctorates awarded by U.S. universities during the FY1976-78 period and the feasibility of identifying and evaluating comparable programs in a particular field. Within each of the 31 fields, programs which awarded more than a specified number of doctorates during the period have been designated for inclusion in the study.

For each of the programs at your institution that are to be evaluated, we ask that you furnish the names and ranks of all faculty members who participate significantly in education toward the research doctorate, along with some basic information (as indicated) about the program itself. A set of instructions and a computer-printed roster (organized by field) are enclosed. In addition, you are given an opportunity to nominate other programs at your institution that are not on the roster, but that you believe have significant distinction and should be included in our evaluation. Any program you nominate must belong in one of the 31 fields covered by the study.

The information supplied by your institution will be used for two purposes. First, a sample of the faculty members identified with each program will be selected to evaluate research-doctorate programs in their fields at other universities. The selection will be made in such a way as to ensure that all institutional programs and faculty ranks are adequately represented in each field category. Secondly, a list of names of faculty and some of the program information you supply will be provided to evaluators selected from other institutions. Thus, it is important that you provide accurate and up-to-date information. You may wish to ask department chairmen or other appropriate persons at your institution to assist in providing the information requested. If you do so, we ask that your office coordinate the effort by collecting the information on each program and sending a single package to us in the envelope provided.

We hope that you will be able to complete this request by December 15. Should you have any questions regarding our request, please call (collect) Porter Coggeshall, the study director, at (202)389-6552. Thank you for your help in this effort.

Sincerely,

Lyle V. Jones

Lyle V. Jones
Co-Chairman

Gardner Lindzey

Gardner Lindzey
Co-Chairman

INSTRUCTIONS

General Instructions

- Provided on the first page of the accompanying roster is a list of the 31 program fields to be covered in this study. Those program fields for which you are requested to furnish information have been designated with an asterisk (*).

- For every designated field there is a separate set of roster pages. Please provide all of the information requested on these pages.

- If your institution offers more than one research-doctorate program in a designated field, we ask that you copy the roster pages furnished for that field category and provide a separate set of information for each program. For example, if your university offers one doctoral program in statistics and another in biostatistics, these should be listed separately. For this purpose, programs offered by different departments (or other administative units) that are advertised as distinct programs in your catalogues would be listed separately. Do not consider different specialty areas within a department to be separate programs.

- If your institution currently does not offer a research-doctorate program in an asterisked field or if, in your judgment, a doctoral program offered fails to fit the designated field category, please so indicate on the roster pages provided for that field.

List of Faculty Members (as of December 1, 1980)

- On each program roster please provide the names of faculty members who participate significantly in doctoral education.

- Included should be individuals who (a) are members of the regular academic faculty (typically holding the rank of assistant, associate, or full professor) and (b) regularly teach doctoral students and/or serve on doctoral committees.

- Members of the faculty who are currently on leave of absence but meet the above criteria should be included.

- Visiting faculty members should not be included.

- Emeritus or adjunct faculty members (or faculty with other comparable ranks) should also be excluded unless they currently participate significantly in doctoral education.

- Members of the faculty who participate significantly in doctoral education in more than one program should be listed on the roster for each program in which they participate.

- In many instances the list of faculty for a program may be identical to an institutional list of graduate faculty.

- Faculty names should be provided in the form in which they are most likely to be recognized by colleagues in the field. We prefer that, within each academic rank, you list faculty alphabetically by last name.

Nomination of Faculty to Serve as Program Evaluators (Column 3 of Faculty Roster)

- Please check the names of at least two faculty members in each academic rank within each program who would be available and, in your opinion, well-qualified to evaluate research-doctorate programs in their field.

- A sample of evaluators will be selected from the list of faculty you provide for each program. In selecting evaluators preference will be given to those whose names you have checked. If no names are checked, a random sample will be selected from the faculty list.

Faculty Who Do Not Hold Ph.D. Degrees From U.S. Universities (Column 4 of Faculty Roster)

- In order to help us match the faculty names you provide with records in the Doctorate Records File (maintained by the National Research Council), we ask that you identify those faculty members who do not hold a Ph.D. or equivalent research-doctorate from a university in the United States.

- This information will be used only for the purposes of collating records and will not be released to those who are selected to evaluate your institution's programs. Nor will this information affect in any way the selection of program evaluators from your institution's faculty.

Nomination of Additional Programs

- We recognize the possibility that we may have omitted one or more research-doctorate programs at your institution that belong to (non-asterisked) fields listed on the first page of the roster and that you believe should be included in this study.

- The last two pages of the accompanying roster are provided for the nomination of an additional program. You are asked to provide the names of faculty and other information about each program you nominate. Should you decide to nominate more than one program, it will be necessary to make additional copies of these two pages of the roster.

- Please restrict your nominations to programs in your institution that you consider to be of uncommon distinction and that have awarded no fewer than two doctorates during the past two years.

- Only programs which fall under one of the 31 field categories listed on the first page of the accompanying roster will be considered for inclusion in the study.

PLEASE RETURN COMPLETED ROSTER IN
THE ENCLOSED ENVELOPE TO:

COMMITTEE ON AN ASSESSMENT OF
QUALITY-RELATED CHARACTERISTICS
OF RESEARCH-DOCTORATE PROGRAMS
NATIONAL RESEARCH COUNCIL, JH-711
2101 CONSTITUTION AVENUE, N.W.
WASHINGTON, D.C. 20418

FIELDS INCLUDED IN THE STUDY

ARTS AND HUMANITIES

* ART HISTORY
* CLASSICS
* ENGLISH LANGUAGE AND LITERATURE
* FRENCH LANGUAGE AND LITERATURE
* GERMAN LANGUAGE AND LITERATURE

LINGUISTICS
MUSIC

* PHILOSOPHY
* SPANISH AND PORTUGUESE LANGUAGE AND LITERATURE

BIOLOGICAL SCIENCES

* BIOCHEMISTRY

BOTANY (INCLUDING PLANT PHYSIOLOGY, PLANT PATHOLOGY, MYCOLOGY)

* CELLULAR BIOLOGY/MOLECULAR BIOLOGY
* MICROBIOLOGY (INCLUDING IMMUNOLOGY, BACTERIOLOGY, PARASITOLOGY, VIROLOGY)
* PHYSIOLOGY (ANIMAL, HUMAN)

ZOOLOGY

ENGINEERING

* CHEMICAL ENGINEERING
* CIVIL ENGINEERING
* ELECTRICAL ENGINEERING
* MECHANICAL ENGINEERING

PHYSICAL SCIENCES

* CHEMISTRY
* COMPUTER SCIENCES
* GEOSCIENCES (INCLUDING GEOLOGY, GEOCHEMISTRY, GEOPHYSICS, GENL EARTH SCI)
* MATHEMATICS
* PHYSICS (EXCLUDING ASTRONOMY, ASTROPHYSICS)

STATISTICS (INCLUDING BIOSTATISTICS)

SOCIAL AND BEHAVIORAL SCIENCES

* ANTHROPOLOGY
* ECONOMICS
* HISTORY
* POLITICAL SCIENCE
* PSYCHOLOGY
* SOCIOLOGY

* DESIGNATES FIELDS FOR WHICH YOU ARE REQUESTED TO PROVIDE INFORMATION ON RESEARCH-DOCTORATE PROGRAMS IN YOUR INSTITUTION. (SEE INSTRUCTION SHEET REGARDING NOMINATION OF ADDITIONAL PROGRAMS TO BE INCLUDED IN THE STUDY).

```
**************************************************
***                                - PART A  ***
**************************************************
```

PLEASE ANSWER EACH OF THE FOLLOWING QUESTIONS ABOUT THE RESEARCH-DOCTORATE PROGRAM

IN ______________________________

(1) WHAT IS THE NAME OF THE DEPARTMENT (OR EQUIVALENT ACADEMIC UNIT) IN WHICH THIS RESEARCH-DOCTORATE PROGRAM IS OFFERED ?

....

(2) HOW MANY PH.D.'S (OR EQUIVALENT RESEARCH-DOCTORATES) HAVE BEEN AWARDED IN THE PROGRAM IN EACH OF THE LAST FIVE ACADEMIC YEARS ?

1975-76 ....

1976-77 ....

1977-78 ....

1978-79 ....

1979-80 ....

(3) APPROXIMATELY HOW MANY FULL-TIME AND PART-TIME GRADUATE STUDENTS ENROLLED IN THE PROGRAM AT THE PRESENT TIME (FALL 1980) INTEND TO EARN DOCTORATES ?

FULL-TIME STUDENTS ....

PART-TIME STUDENTS ....

TOTAL ....

(4) IN APPROXIMATELY WHAT YEAR WAS THIS RESEARCH-DOCTORATE PROGRAM INITIATED ? (IF PROGRAM WAS DISCONTINUED AND SUBSEQUENTLY REINSTATED, PLEASE GIVE YEAR IT WAS REINSTATED) .

....

```
****************************************************
*** _                                 - PART B   ***
****************************************************
```

(1) LIST BELOW <u>ALL FACULTY WHO PARTICIPATE SIGNIFICANTLY IN DOCTORAL EDUCATION</u> IN THIS PROGRAM (SEE INSTRUCTIONS SHEET). PLEASE PRINT OR TYPE NAMES IN FOLLOWING FORMAT: EXAMPLE: MARY A. JONES A. B. SMITH, JR.	(2) INDICATE THE ACADEMIC RANK OF EACH FACULTY MEMBER (PROF., ASSOC. PROF., ASST. PROF., ETC.).	(3) CHECK BELOW AT LEAST 2 FACULTY IN <u>EACH</u> RANK AVAILABLE AND WELL-QUALIFIED TO <u>EVALUATE</u> OTHER PROGRAMS (SEE INSTRUCTIONS SHEET).	(4) CHECK BELOW ANY FACULTY WHO DO <u>NOT</u> HOLD A PH.D. OR OTHER RESEARCH-DOCTORATE FROM A <u>UNIVERSITY IN THE</u> U.S. (SEE INSTRUCTIONS SHEET).
01	..	( )	( )
02	..	( )	( )
03	..	( )	( )
04	..	( )	( )
05	..	( )	( )
06	..	( )	( )
07	..	( )	( )
08	..	( )	( )
09	..	( )	( )
10	..	( )	( )
11	..	( )	( )
12	..	( )	( )
13	..	( )	( )
14	..	( )	( )
15	..	( )	( )
16	..	( )	( )
17	..	( )	( )
18	..	( )	( )
19	..	( )	( )
20	..	( )	( )

(PART B CONTINUED ON NEXT PAGE)

APPENDIX B

SURVEY OF EARNED DOCTORATES

(Conducted by the National Research Council under the sponsorship of the National Science Foundation, the Department of Education, the National Institutes of Health, and the National Endowment for the Humanities.)

This annual survey of new recipients of Ph.D. or equivalent research doctorates in all fields of learning contains information describing their demographic characteristics, educational background, graduate training, and postgraduation plans. The source file includes nearly complete data from all 1958-81 doctorate recipients and partial information for all 1920-57 doctoral graduates.

NSF Form 558 1977
OMB No. 99-R0290
Approval Expires June 30, 1979

SURVEY OF EARNED DOCTORATES

This form is to be returned to the GRADUATE DEAN, for forwarding to ....

Board on Human-Resource Data and Analyses
Commission on Human Resources
National Research Council
2101 Constitution Avenue, Washington, D. C. 20418

Please print or type.

A. Name in full: .... (Last Name) (First Name) (Middle Name) (9-30)

Cross Reference: Maiden name or former name legally changed .... (31)

B. Permanent address through which you could always be reached: (Care of, if applicable) ....

.... (Number) (Street) (City)

.... (State) (Zip Code) (Or Country if not U.S.)

C. U.S. Social Security Number: __ __ __ - __ __ - __ __ __ __ (32-40)

D. Date of birth: (41-45) .... (Month) (Day) (Year) Place of birth: (46-47) .... (State) (Or C[illegible]y if not U.S.)

E. Sex: 1 ☐ Male 2 ☐ Female (48)

F. Marita' status: 1 ☐ Married 2 ☐ Not married (including widowed, divorced) (49)

G. Citizenship: 0 ☐ U.S. native 2 ☐ Non U.S., Immigrant (Permanent Resident)
1 ☐ U.S. naturalized 3 ☐ Non-U.S., Non-Immigrant (Temporary Resident) (50)
If Non-U.S., indicate country of present citizenship .... (51-52)

H. Racial or ethnic group: (Check all that apply.) *A person having origins in* —
0 ☐ American Indian or Alaskan Native .....any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.
1 ☐ Asian or Pacific Islander ....any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands. This area includes, for example, China, Japan, Korea, the Philippine Islands, and Samoa.
2 ☐ Black, not of Hispanic Origin ....any of the black racial groups of Africa.
3 ☐ White, not of Hispanic Origin ....any of the original peoples of Europe, North Africa, or the Middle East.
4 ☐ Hispanic ....Mexican, Puerto Rican, Central or South American, or other Spanish culture or origins, regardless of race. (53-55)

I. Number of dependents: Do not include yourself. (Dependent = someone receiving at least one half of his or her support from you) ....(56)

J. U.S. veteran status: 0 ☐ Veteran 1 ☐ On active duty 2 ☐ Non-veteran or not applicable (57)

EDUCATION

K. High school last attended: .... (School Name) (City) (State) (58-59)

Year of graduation from high school: .... (60-61)

L. List in the table below all collegiate and graduate institutions you have attended including 2-year colleges. List chronologically, and include your doctoral institution as the last entry.

Institution Name	Location	Years Attended		Major Field		Minor Field	Degree (if any)		
		From	To	Use Specialties List			Title of Degree	Granted	
				Name	Number	Number		Mo.	Yr.

M. Enter below the title of your doctoral dissertation and the most appropriate classification number and field. If a project report or a musical or literary composition (not a dissertation) is a degree requirement, please check box. ☐ (44)

Title ....

Classify using Specialties List

Number .... Name of field ....

N. Name the department (or interdisciplinary committee, center, institute, etc.) and school or college of the university which supervised your doctoral program: .... (Department/Institute/Committee/Program) (School)

O. Name of your dissertation adviser: .... (Last Name) (First Name) (Middle Initial)

continued on next page

SURVEY OF EARNED DOCTORATES, Cont.

P. Please enter a "1" beside your primary source of support during graduate study. Enter a "2" beside your secondary source of support during graduate study. Check all other sources from which support was received.

58 ___ NSF Fellowship
59 ___ NSF Traineeship
60 ___ NIH Fellowship
61 ___ NIH Traineeship
62 ___ NDEA Fellowship
63 ___ Other HEW
64 ___ AEC/ERDA Fellowship
65 ___ NASA Traineeship
66 ___ GI Bill
67 ___ Other Federal support (specify) ....
68 ___ Woodrow Wilson Fellowship
69 ___ Other U.S. national fellowship (specify) ....
70 ___ University Fellowship
71 ___ Teaching Assistantship
72 ___ Research Assistantship
73 ___ Educational fund of industrial or business firm
74 ___ Other institutional funds (specify) ....
75 ___ Own earnings
76 ___ Spouse's earnings
77 ___ Family contributions
78 ___ Loans (NDSL direct)
79 ___ Other loans
80 ___ Other (specify) ....

Q. Please check the space which most fully describes your status during the year immediately preceding the doctorate.

0 ☐ Held fellowship
1 ☐ Held assistantship
2 ☐ Held own research grant
3 ☐ Not employed
4 ☐ Part-time employed

Full-time Employed in: (Other than 0, 1, 2)
5 ☐ College or university, teaching
6 ☐ College or university, non-teaching
7 ☐ Elem. or sec. school, teaching
8 ☐ Elem. or sec. school, non-teaching
9 ☐ Industry or business
(11) ☐ Other (specify) ....

(12) ☐ Any other (specify) .... (9)

R. How many years (full-time equivalent basis) of professional work experience did you have prior to the doctorate? (include assistantships as professional experience) .... (10-11)

POSTGRADUATION PLANS

S. How well defined are your postgraduation plans?
0 ☐ Have signed contract or made definite commitment
1 ☐ Am negotiating with a specific organization, or more than one
2 ☐ Am seeking appointment but have no specific prospects
3 ☐ Other (specify) .... (12)

T. What are your immediate postgraduation plans?
0 ☐ Postdoctoral fellowship?
1 ☐ Postdoctoral research associateship?
2 ☐ Traineeship?
3 ☐ Other study (specify) ....
Go to Item "U"
4 ☐ Employment (other than 0, 1, 2, 3)
5 ☐ Military service?
6 ☐ Other (specify) .... (13)
Go to Item "V"

U. If you plan to be on a postdoctoral fellowship, associateship, traineeship or other study

What will be the field of your postdoctoral study?
Classify using Specialties List.
Number .... Field .... (14-16)

What will be the primary source of support?
0 ☐ U.S. Government
1 ☐ College or university
2 ☐ Private foundation
3 ☐ Nonprofit, other than private foundation
4 ☐ Other (specify) .... (17)
6 ☐ Unknown
Go to Item "W"

V. If you plan to be employed, enter military service, or other — What will be the type of employer?
0 ☐ 4-year college or university other than medical school
1 ☐ Medical school
2 ☐ Jr. or community college
3 ☐ Elem. or sec. school
4 ☐ Foreign government
5 ☐ U.S. Federal government
6 ☐ U.S. state government
7 ☐ U.S. local government
8 ☐ Nonprofit organization
9 ☐ Industry or business
(11) ☐ Self-employed
(12) ☐ Other (specify) .... (18)

Indicate *primary* work activity with "1" in appropriate box; *secondary* work activity (if any) with "2" in appropriate box.
0 ☐ Research and development
1 ☐ Teaching
2 ☐ Administration
3 ☐ Professional services to individuals
5 ☐ Other (specify) .... (19-20)

In what field will you be working?
Please enter number from Specialties List .... (21-23)

Go to Item "W"

W. What is the name and address of the organization with which you will be associated?

....
(Name of Organization)

.... (Street) .... (City, State) (Or Country if not U.S.) (24-29)

BACKGROUND INFORMATION

X. Please indicate, by circling the highest grade attained, the education of

your father:	none	1 2 3	4 5 6	7 8	9 10 11	12	1 2 3	4	MA, MD	PhD	Postdoctoral	(30)
		Elementary school			High school		College		Graduate			
your mother	none	1 2 3	4 5 6	7 8	9 10 11	12	1 2 3	4	MA, MD	PhD	Postdoctoral	(31)
	0	1	2	3	4	5	6	7	8	9	(11)	

Signature .... Date completed .... (32-34)

APPENDIX C

LETTER TO EVALUATORS

COMMITTEE ON AN ASSESSMENT OF QUALITY-RELATED CHARACTERISTICS
OF RESEARCH-DOCTORATE PROGRAMS IN THE UNITED STATES

Established by the Conference Board of Associated Research Councils

Office of the Staff Director / National Research Council / 2101 Constitution Avenue, N.W. / Washington, D.C. 20418

April 14, 1981

Dear

As you may already know, our committee has undertaken an assessment of research-doctorate programs in U.S. universities. The study is examining approximately 2,650 programs in 31 fields in the arts and humanities, biological sciences, engineering, physical and mathematical sciences, and social sciences. A study prospectus is provided on the reverse of this page. You have been selected from a faculty list furnished by your institution to evaluate programs offering research-doctorates in the field of Psychology.

On the first page of the attached form is a list of the 150 programs that are being evaluated in this field. These programs produce more than 90 percent of the doctorate recipients in the field. In order to keep the task manageable, you are being asked to consider a randomly selected subset of 50 of these programs. These are designated with an asterisk in the list on the next page and are presented in random sequence on the evaluation sheets that follow. Please read the accompanying instructions carefully before attempting your evaluations.

We ask that you complete the attached survey form and return it in the enclosed envelope within the next three weeks. The evaluations you and your colleagues render will constitute an important component of this study. Your prompt attention to this request will be very much appreciated by our committee.

Sincerely,

Gardner Lindzey

Lyle Jones
For the Study Committee

Enclosures

COMMITTEE MEMBERS

Lyle V. Jones, Co-Chairman
Gardner Lindzey, Co-Chairman
Paul A. Albrecht
Marcus Alexis
Robert M. Bock
Philip E. Converse
James H. M. Henderson
Ernest S. Kuh
Winfred P. Lehmann
Saunders Mac Lane
Nancy S. Milburn
Lincoln E. Moses
James C. Olson
Kumar Patel
Michael J. Pelczar, Jr.
Jerome B. Schneewind
Duane C. Spriestersbach
Harriet A. Zuckerman

RESEARCH-DOCTORATE PROGRAMS IN THE FIELD OF PSYCHOLOGY

(* DESIGNATES THE PROGRAMS WHICH YOU ARE ASKED TO EVALUATE ON THE FOLLOWING PAGES.)

INSTITUTION - DEPARTMENT/ACADEMIC UNIT

ADELPHI UNIVERSITY - PSYCHOLOGY
UNIVERSITY OF ALABAMA, TUSCALOOSA - EXPERIMENTAL AND CLINICAL PSYCHOLOGY
ARIZONA STATE UNIVERSITY, TEMPE - PSYCHOLOGY
UNIVERSITY OF ARIZONA, TUCSON - PSYCHOLOGY
UNIVERSITY OF ARKANSAS, FAYETTEVILLE - PSYCHOLOGY
AUBURN UNIVERSITY - PSYCHOLOGY
BAYLOR UNIVERSITY, WACO - PSYCHOLOGY
* ROSEMEAD GRAD SCH OF PROF PSYCHOLOGY - SCHOOL OF PROFESSIONAL PSYCHOLOGY
* BOSTON UNIVERSITY - PSYCHOLOGY
BOWLING GREEN STATE UNIVERSITY - PSYCHOLOGY
BRANDEIS UNIVERSITY - PSYCHOLOGY
* BRIGHAM YOUNG UNIVERSITY - PSYCHOLOGY
* BROWN UNIVERSITY - PSYCHOLOGY
* BRYN MAWR COLLEGE - PSYCHOLOGY
* CALIF SCH OF PROF PSYCHOLOGY, SAN DIEGO - PSYCHOLOGY
* CALIF SCH OF PROF PSYCHOLOGY, BERKELEY - PSYCHOLOGY
UNIVERSITY OF CALIFORNIA, BERKELEY - PSYCHOLOGY
UNIVERSITY OF CALIFORNIA, DAVIS - PSYCHOLOGY
UNIVERSITY OF CALIFORNIA, IRVINE - PSYCHOBIOLOGY (SCHOOL OF BIOLOGICAL SCIENCES)
UNIVERSITY OF CALIFORNIA, IRVINE - COGNITIVE SCI/SOCIAL RELATIONS (SCHOOL OF SOCIAL SCI)
UNIVERSITY OF CALIFORNIA, LOS ANGELES - PSYCHOLOGY
* UNIVERSITY OF CALIFORNIA, RIVERSIDE - PSYCHOLOGY
* UNIVERSITY OF CALIFORNIA, SAN DIEGO - PSYCHOLOGY
UNIVERSITY OF CALIFORNIA, SANTA BARBARA - PSYCHOLOGY
CARNEGIE-MELLON UNIVERSITY - PSYCHOLOGY AND EDUCATION
* CASE WESTERN RESERVE UNIVERSITY - CLINICAL PSYCHOLOGY
* CATHOLIC UNIVERSITY OF AMERICA - PSYCHOLOGY
UNIVERSITY OF CHICAGO - BEHAVIORAL SCIENCES
* UNIVERSITY OF CINCINNATI - PSYCHOLOGY
CUNY, THE GRADUATE SCHOOL - PSYCHOLOGY
* CLAREMONT GRADUATE SCHOOL - PSYCHOLOGY
CLARK UNIVERSITY - PSYCHOLOGY
COLORADO STATE UNIVERSITY, FT COLLINS - PSYCHOLOGY
UNIVERSITY OF COLORADO, BOULDER - PSYCHOLOGY
COLUMBIA UNIV-GRAD SCHOOL OF ARTS & SCI - PSYCHOLOGY
TEACHERS COLLEGE, COLUMBIA UNIV - PSYCHOLOGY
* UNIVERSITY OF CONNECTICUT, STORRS - PSYCHOLOGY
CORNELL UNIVERSITY, ITHACA - PSYCHOLOGY
UNIVERSITY OF DELAWARE, NEWARK - PSYCHOLOGY
* UNIVERSITY OF DENVER - PSYCHOLOGY
DE PAUL UNIVERSITY - PSYCHOLOGY
UNIVERSITY OF DETROIT - PSYCHOLOGY
DUKE UNIVERSITY - PSYCHOLOGY
EMORY UNIVERSITY - PSYCHOLOGY
* FORDHAM UNIVERSITY - PSYCHOLOGY
FULLER THEOLOGICAL SEMINARY (PASADENA) - PSYCHOLOGY
* GEORGE WASHINGTON UNIVERSITY - PSYCHOLOGY
* GEORGIA STATE UNIVERSITY, ATLANTA - PSYCHOLOGY
UNIVERSITY OF GEORGIA, ATHENS - PSYCHOLOGY
HARVARD UNIVERSITY - PSYCHOLOGY AND SOCIAL RELATIONS
* UNIVERSITY OF HAWAII - PSYCHOLOGY
HOFSTRA UNIVERSITY - PSYCHOLOGY
* UNIVERSITY OF HOUSTON - PSYCHOLOGY
ILLINOIS INSTITUTE OF TECHNOLOGY - PSYCHOLOGY
* UNIV OF ILLINOIS AT URBANA-CHAMPAIGN - PSYCHOLOGY
UNIVERSITY OF ILLINOIS, CHICAGO CIRCLE - PSYCHOLOGY
INDIANA UNIVERSITY, BLOOMINGTON - PSYCHOLOGY
IOWA STATE UNIVERSITY, AMES - PSYCHOLOGY
UNIVERSITY OF IOWA, IOWA CITY - PSYCHOLOGY
* JOHNS HOPKINS UNIVERSITY - PSYCHOLOGY
* KANSAS STATE UNIVERSITY, MANHATTAN - PSYCHOLOGY
* UNIVERSITY OF KANSAS - HUMAN DEVELOPMENT AND FAMILY LIFE
UNIVERSITY OF KANSAS - PSYCHOLOGY
KENT STATE UNIVERSITY - PSYCHOLOGY
UNIVERSITY OF KENTUCKY - PSYCHOLOGY
LONG ISLAND UNIVERSITY, THE BROOKLYN CENTER - PSYCHOLOGY
LOUISIANA STATE UNIVERSITY, BATON ROUGE - PSYCHOLOGY
* UNIVERSITY OF LOUISVILLE - PSYCHOLOGY
LOYOLA UNIVERSITY OF CHICAGO - PSYCHOLOGY
UNIVERSITY OF MARYLAND, COLLEGE PARK - PSYCHOLOGY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY - PSYCHOLOGY
* UNIVERSITY OF MASSACHUSETTS, AMHERST - PSYCHOLOGY
MIAMI UNIVERSITY (OHIO) - PSYCHOLOGY

* UNIVERSITY OF MIAMI (FLORIDA) - PSYCHOLOGY
MICHIGAN STATE UNIVERSITY, EAST LANSING - PSYCHOLOGY
UNIVERSITY OF MICHIGAN, ANN ARBOR - PSYCHOLOGY
UNIVERSITY OF MINNESOTA - PSYCHOLOGY
* UNIVERSITY OF MISSISSIPPI, OXFORD - PSYCHOLOGY
UNIVERSITY OF MISSOURI, COLUMBIA - PSYCHOLOGY
* UNIVERSITY OF MONTANA, MISSOULA - PSYCHOLOGY
* UNIVERSITY OF NEBRASKA, LINCOLN - PSYCHOLOGY
UNIVERSITY OF NEW HAMPSHIRE - PSYCHOLOGY
UNIVERSITY OF NEW MEXICO, ALBUQUERQUE - PSYCHOLOGY
NEW SCHOOL FOR SOCIAL RESEARCH (NYC) - PSYCHOLOGY
NEW YORK UNIVERSITY - PSYCHOLOGY
UNIVERSITY OF NORTH CAROLINA, CHAPEL HILL - PSYCHOLOGY
NORTH CAROLINA STATE UNIVERSITY, RALEIGH - PSYCHOLOGY
UNIVERSITY OF NORTH CAROLINA, GREENSBORO - PSYCHOLOGY
UNIVERSITY OF NORTH DAKOTA, GRAND FORKS - PSYCHOLOGY
NORTH TEXAS STATE UNIVERSITY, DENTON - PSYCHOLOGY
NORTHEASTERN UNIVERSITY - PSYCHOLOGY
* NORTHERN ILLINOIS UNIVERSITY, DE KALB - PSYCHOLOGY
NORTHWESTERN UNIVERSITY - PSYCHOLOGY
* UNIVERSITY OF NOTRE DAME - PSYCHOLOGY
OHIO STATE UNIVERSITY - PSYCHOLOGY
* OHIO UNIVERSITY - PSYCHOLOGY
OKLAHOMA STATE UNIVERSITY, STILLWATER - PSYCHOLOGY
UNIVERSITY OF OKLAHOMA - PSYCHOLOGY
UNIVERSITY OF OREGON, EUGENE - PSYCHOLOGY
* PENNSYLVANIA STATE UNIVERSITY - PSYCHOLOGY
UNIVERSITY OF PENNSYLVANIA - PSYCHOLOGY
* UNIVERSITY OF PITTSBURGH - PSYCHOLOGY
PRINCETON UNIVERSITY - PSYCHOLOGY
PURDUE UNIVERSITY, WEST LAFAYETTE - PSYCHOLOGICAL SCIENCES
UNIVERSITY OF RHODE ISLAND - PSYCHOLOGY
RICE UNIVERSITY - PSYCHOLOGY
* UNIVERSITY OF ROCHESTER - PSYCHOLOGY
* RUTGERS UNIVERSITY, NEW BRUNSWICK - PSYCHOLOGY
RUTGERS UNIVERSITY, NEWARK - PSYCHOLOGY
* SAINT LOUIS UNIVERSITY - PSYCHOLOGY
* UNIVERSITY OF SOUTH CAROLINA, COLUMBIA - PSYCHOLOGY
UNIVERSITY OF SOUTH DAKOTA, VERMILLION - PSYCHOLOGY
UNIVERSITY OF SOUTHERN CALIFORNIA - PSYCHOLOGY
* SOUTHERN ILLINOIS UNIVERSITY, CARBONDALE - PSYCHOLOGY
UNIV OF SOUTHERN MISSISSIPPI, HATTIESBURG - PSYCHOLOGY
STANFORD UNIVERSITY - PSYCHOLOGY
* UNIVERSITY OF FLORIDA, GAINESVILLE - PSYCHOLOGY
FLORIDA STATE UNIVERSITY, TALLAHASSEE - PSYCHOLOGY
UNIVERSITY OF SOUTH FLORIDA, TAMPA - PSYCHOLOGY
SUNY AT ALBANY - PSYCHOLOGY
* SUNY AT BINGHAMTON - PSYCHOLOGY
SUNY AT BUFFALO - PSYCHOLOGY
SUNY AT STONY BROOK - PSYCHOLOGY
SYRACUSE UNIVERSITY - PSYCHOLOGY
* TEMPLE UNIVERSITY - PSYCHOLOGY
* UNIVERSITY OF TENNESSEE, KNOXVILLE - PSYCHOLOGY
TEXAS CHRISTIAN UNIVERSITY, FORT WORTH - PSYCHOLOGY
TEXAS TECH UNIVERSITY, LUBBOCK - PSYCHOLOGY
UNIVERSITY OF TEXAS, AUSTIN - PSYCHOLOGY
* TEXAS WOMAN'S UNIVERSITY, DENTON - PSYCHOLOGY
UNIVERSITY OF TOLEDO - PSYCHOLOGY
TULANE UNIVERSITY - PSYCHOLOGY
* UNIVERSITY OF UTAH, SALT LAKE CITY - PSYCHOLOGY
UTAH STATE UNIVERSITY, LOGAN - PSYCHOLOGY
VANDERBILT UNIVERSITY - PSYCHOLOGY
* UNIVERSITY OF VERMONT - PSYCHOLOGY
VIRGINIA COMMONWEALTH UNIVERSITY - PSYCHOLOGY
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIV - PSYCHOLOGY
UNIVERSITY OF VIRGINIA - PSYCHOLOGY
WASHINGTON STATE UNIVERSITY, PULLMAN - PSYCHOLOGY
WASHINGTON UNIVERSITY (ST LOUIS) - PSYCHOLOGY
* UNIVERSITY OF WASHINGTON, SEATTLE - PSYCHOLOGY
WAYNE STATE UNIVERSITY - PSYCHOLOGY
* WEST VIRGINIA UNIVERSITY - PSYCHOLOGY
WESTERN MICHIGAN UNIVERSITY - PSYCHOLOGY
* UNIVERSITY OF WISCONSIN, MADISON - PSYCHOLOGY
UNIVERSITY OF WISCONSIN, MILWAUKEE - PSYCHOLOGY
UNIVERSITY OF WYOMING - PSYCHOLOGY
YALE UNIVERSITY - PSYCHOLOGY
YESHIVA UNIVERSITY - PSYCHOLOGY

INSTRUCTIONS

At the top of the next page please provide the information requested on the highest degree you hold and your current field of specialization. You may be assured that all information you furnish on the survey form is to be used for purposes of statistical description only and that the confidentiality of your responses will be protected.

On the pages that follow you are asked to judge 50 programs (presented in random sequence) that offer the research-doctorate. Each program is to be evaluated in terms of: (1) scholarly quality of program faculty; (2) effectiveness of program in educating research scholars/scientists; and (3) change in program quality in the last five years (see below). Although the assessment is limited to these factors, our committee recognizes that other factors are relevant to the quality of doctoral programs, and that graduate programs serve important purposes in addition to that of educating doctoral candidates.

A list of the faculty members signficantly involved in each program, the name of the academic unit in which the program is offered, and the number of doctorates awarded in that program during the last five years have been printed on the survey form (whenever available). Although this information has been furnished to us by the institution and is believed to be accurate, it has not been verified by our study committee and may have a few omissions, misspellings, or other errors.

Before marking your responses on the survey form, you may find it helpful to look over the full set of programs you are being asked to evaluate. In making your judgments about each program, please keep in mind the following instructions:

(1) Scholarly Quality of Program Faculty. Check the box next to the term that most closely corresponds to your judgment of the quality of faculty in the research-doctorate program described. Consider only the scholarly competence and achievements of the faculty. It is suggested that no more than five programs be designated "distinguished."

(2) Effectiveness of Program in Educating Research Scholars/Scientists. Check the box next to the term that most closely corresponds to your judgment of the doctoral program's effectiveness in educating research scholars/scientists. Consider the accessibility of the faculty, the curricula, the instructional and research facilities, the quality of graduate students, the performance of the graduates, and other factors that contribute to the effectiveness of the research-doctorate program.

(3) Change in Program Quality in Last Five Years. Check the box next to the term that most closely corresponds to your estimate of the change that has taken place in the research-doctorate program in the last five years. Consider both the scholarly quality of the program faculty and the effectiveness of the program in educating research scholars/scientists. Compare the quality of the program today with its quality five years ago--not the change in the program's relative standing among other programs in the field.

In assessing each of these factors, mark the category "Don't know well enough to evaluate" if you are unfamiliar with that aspect of the program. It is quite possible that for some programs you may be knowledgeable about the scholarly quality of the faculty, but not about the effectiveness of the program or change in program quality.

For each of the programs identified, you are also asked to indicate the extent to which you are familiar with the work of members of the program faculty. For example, if you recognize only a very small fraction of the faculty, you should mark the category "Little or no familiarity."

Please be certain that you have provided a set of responses for each of the programs identified on the following pages. The fully completed survey form should be returned in the enclosed envelope to:

Committee on an Assessment of Quality-Related
Characteristics of Research-Doctorate Programs
National Research Council, JH-638
2101 Constitution Avenue, N.W.
Washington, D.C. 20418

Our committee will be most appreciative of your thoughtful assessment of these research-doctorate programs. We welcome any comments you may wish to append to the completed survey form.

PLEASE PROVIDE THE FOLLOWING INFORMATION: FORM NO. 4128-78

HIGHEST DEGREE YOU HOLD: ( ) PH.D. ( ) OTHER (PLEASE SPECIFY): ____________________

YEAR OF HIGHEST DEGREE: ________

INSTITUTION OF HIGHEST DEGREE: ____________________

YOUR CURRENT FIELD OF SPECIALIZATION (CHECK ONLY ONE):

A. ( ) CLINICAL PSYCHOLOGY
B. ( ) COUNSELING AND GUIDANCE
C. ( ) DEVELOPMENTAL/GERONTOLOGICAL PSYCHOLOGY
D. ( ) EDUCATIONAL PSYCHOLOGY
E. ( ) EXPERIMENTAL PSYCHOLOGY
F. ( ) INDUSTRIAL/PERSONNEL PSYCH.
G. ( ) PHYSIOLOGICAL PSYCHOLOGY
H. ( ) PSYCHOMETRICS
I. ( ) SCHOOL PSYCHOLOGY
J. ( ) SOCIAL PSYCHOLOGY
K. ( ) PSYCHOLOGY, GENERAL
L. ( ) OTHER (PLEASE SPECIFY):

____

INSTITUTION: **UNIVERSITY OF NEBRASKA, LINCOLN** **FORM NO. 4128-01**
DEPARTMENT/ACADEMIC UNIT: **PSYCHOLOGY**
TOTAL DOCTORATES AWARDED 1976-80: 67

PROFESSORS: William J. ARNOLD, James K. COLE, Richard A. DIENSTBIER, Frank J. DUDEK, Herbert HOWE, Donald D. JENSEN, Alvin W. LANDFIELD, Monte M. PAGE, Bruce D. SALES, Harry F. SHELLEY, Theo P. SONDEREGGER

ASSOCIATE PROFESSORS: John J. BERMAN, Virginia A. BERMAN, Daniel J. BERNSTEIN, James L. CONNOR, John H FLOWERS, David Scott HARGROVE, P. Clayton RIVERS, Brian P. V. SARATA

ASSISTANT PROFESSORS: Natalie P. PORTER, William D. SPAULDING

SCHOLARLY QUALITY OF PROGRAM FACULTY

1. ( ) DISTINGUISHED
2. ( ) STRONG
3. ( ) GOOD
4. ( ) ADEQUATE
5. ( ) MARGINAL
6. ( ) NOT SUFFICIENT FOR DOCTORAL EDUCATION

0. ( ) DON'T KNOW WELL ENOUGH TO EVALUATE

FAMILIARITY WITH WORK OF PROGRAM FACULTY

1. ( ) CONSIDERABLE FAMILIARITY
2. ( ) SOME FAMILIARITY
3. ( ) LITTLE OR NO FAMILIARITY

EFFECTIVENESS OF PROGRAM IN EDUCATING RESEARCH SCHOLARS/SCIENTISTS

1. ( ) EXTREMELY EFFECTIVE
2. ( ) REASONABLY EFFECTIVE
3. ( ) MINIMALLY EFFECTIVE
4. ( ) NOT EFFECTIVE

0. ( ) DON'T KNOW WELL ENOUGH TO EVALUATE

CHANGE IN PROGRAM QUALITY IN LAST FIVE YEARS

1. ( ) BETTER THAN FIVE YEARS AGO
2. ( ) LITTLE OR NO CHANGE IN LAST FIVE YEAR
3. ( ) POORER THAN FIVE YEARS AGO

0. ( ) DON'T KNOW WELL ENOUGH TO EVALUATE

INSTITUTION: UNIVERSITY OF UTAH, SALT LAKE CITY FORM NO. 4128-02
DEPARTMENT/ACADEMIC UNIT: PSYCHOLOGY
TOTAL DOCTORATES AWARDED 1976-80: 71

PROFESSORS: James F. ALEXANDER, Irwin ALTMAN, Ernst G. BEIER, Martin M. CHEMERS, Victor B. CLINE, Leslie COOPER, Donna M. GELFAND, Oakley J. GORDON, Donald P. HARTMANN, William A. JOHNSTON, Raymond P. KESNER, Michael E. LAMB, Marigold LINTON, Harold C. NIELSON, Paul B. PORTER, David C. RASKIN, Charles P. SHIMP, Calvin W. TAYLOR, Charles N. UHL, B. Jack WHITE

ASSOCIATE PROFESSORS: David H. DODD, Thomas MALLOY, Richard F. SMITH, Charles W. TURNER, Carol WERNER

ASSISTANT PROFESSORS: S. W. MILLER, Frederick RHODEWALT, Barbara ROGOFF, Donald S. STRASSBERG

SCHOLARLY QUALITY OF PROGRAM FACULTY

1. ( ) DISTINGUISHED
2. ( ) STRONG
3. ( ) GOOD
4. ( ) ADEQUATE
5. ( ) MARGINAL
6. ( ) NOT SUFFICIENT FOR DOCTORAL EDUCATION

0. ( ) DON'T KNOW WELL ENOUGH TO EVALUATE

FAMILIARITY WITH WORK OF PROGRAM FACULTY

1. ( ) CONSIDERABLE FAMILIARITY
2. ( ) SOME FAMILIARITY
3 ( ) LITTLE OR NO FAMILIARITY

EFFECTIVENESS OF PROGRAM IN EDUCATING RESEARCH SCHOLARS/SCIENTISTS

1. ( ) EXTREMELY EFFECTIVE
2. ( ) REASONABLY EFFECTIVE
3. ( ) MINIMALLY EFFECTIVE
4. ( ) NOT EFFECTIVE

0. ( ) DON'T KNOW WELL ENOUGH TO EVALUATE

CHANGE IN PROGRAM QUALITY IN LAST FIVE YEARS

1. ( ) BETTER THAN FIVE YEARS AGO
2. ( ) LITTLE OR NO CHANGE IN LAST FIVE YEAR
3. ( ) POORER THAN FIVE YEARS AGO

0. ( ) DON'T KNOW WELL ENOUGH TO EVALUATE

INSTITUTION: UNIVERSITY OF FLORIDA, GAINESVILLE FORM NO. 4128-03
DEPARTMENT/ACADEMIC UNIT: PSYCHOLOGY
TOTAL DOCTORATES AWARDED 1976-80: 128

PROFESSORS: Yvonne BRACKBILL, William W. DAWSON, Donald A. DEWSBURY, Franz R. EPTING, Jacquelin R. GOLDMAN, Harry A. GRATER Jr, Charles M. LEVY Jr, Norman N. MARKEL, Merle E. MEYER, Henry S. PENNYPACKER Jr, Nathan W. PERRY Jr, Paul G. SCHAUBLE, Barry R. SCHLENKER, Marvin E. SHAW Charles J. VIERCK Jr, Wilse B. WEBB, Robert C. ZILLER

ASSOCIATE PROFESSORS: Afesa M. BELL, William K. BERG, Marc N. BRANCH, Walter R. CUNNINGHAM, Ira S. FISCHLER, Richard A. GRIGGS, James M. JOHNSTON, Edward F. MALAGODI Jr, Patricia H. MILLER, Scott A. MILLER, Dorothy D. NEVILL, Lawrence J. SEVERY, David I. SUCHMAN, Richard M. SWANSON, Carol VANHARTESVELDT

ASSISTANT PROFESSORS: William J. FROMING, Benjamin J. ROBERTS, Richard R. SCOTT, Carolyn M. TUCKER Robert J. WALDBILLIG, Keith D. WHITE

OTHER STAFF: Benjamin BARGER, Rosie P. BINGHAM, Joseph M. KOLARIK

SCHOLARLY QUALITY OF PROGRAM FACULTY

1. ( ) DISTINGUISHED
2. ( ) STRONG
3. ( ) GOOD
4. ( ) ADEQUATE
5. ( ) MARGINAL
6. ( ) NOT SUFFICIENT FOR DOCTORAL EDUCATION

0. ( ) DON'T KNOW WELL ENOUGH TO EVALUATE

FAMILIARITY WITH WORK OF PROGRAM FACULTY

1. ( ) CONSIDERABLE FAMILIARITY
2. ( ) SOME FAMILIARITY
3. ( ) LITTLE OR NO FAMILIARITY

EFFECTIVENESS OF PROGRAM IN EDUCATING RESEARCH SCHOLARS/SCIENTISTS

1. ( ) EXTREMELY EFFECTIVE
2. ( ) REASONABLY EFFECTIVE
3. ( ) MINIMALLY EFFECTIVE
4. ( ) NOT EFFECTIVE

0. ( ) DON'T KNOW WELL ENOUGH TO EVALUATE

CHANGE IN PROGRAM QUALITY IN LAST FIVE YEARS

1. ( ) BETTER THAN FIVE YEARS AGO
2. ( ) LITTLE OR NO CHANGE IN LAST FIVE YEAR
3. ( ) POORER THAN FIVE YEARS AGO

0. ( ) DON'T KNOW WELL ENOUGH TO EVALUATE

APPENDIX D

THE ARL LIBRARY INDEX

(SOURCE: Mandel, Carol A., and Mary P. Johnson, ARL Statistics 1979-80, Association of Research Libraries, Washington, D.C., 1980, pp. 23-24.)

The data tables at the beginning of the ARL Statistics display figures reported by ARL member libraries in 22 categories that, with the exception of the measures of interlibrary loan activity, describe the size of ARL libraries in terms of holdings, expenditures, and personnel. The rank order tables provide an overview of the ranges and medians for 14 of these categories, or variables, among ARL academic libraries as well as quantitatively comparing each library with other ARL member institutions. However, none of the 22 variables provides a summary measure of a library's relative size within ARL or characterizes the ARL libraries as a whole.

The ARL Library Index has been derived as a means of providing this summary characterization, permitting quantitative comparisons of ARL academic libraries, singly and as a group, with other academic libraries. Through the use of statistical techniques known as factor analysis, it can be determined that 15 of the variables reported to ARL are more closely correlated with each other than with other categories. Within this group of 15 variables, some are subsets or combinations of materials. When the subsets and combinations are eliminated, 10 variables emerge as characteristic of ARL libary size. These are: volumes held, volumes added (gross), microform units held, current serials received, expenditures for library materials, expenditures for binding, total salary and wage expenditures, other operating expenditures, number of professional staff, and number of nonprofessional staff.

These 10 categories delineate an underlying dimension, or factor, of library size. By means of principal component analysis, a technique that is a variant of factor analysis, it is possible to calculate the correlations of each of the variables with this hypothetical factor of library size. From this analysis a weight for each variable can be determined based on how closely that variable is correlated with the overall dimension of library size defined by all 10 categories. A high correlation indicates that much of the variation in ARL library size is accounted for by the variable in question, implying a characteristic in which ARL libraries are relatively alike. The component score coefficients, or weights, for the 1979-80 ARL academic library data are as follows:

Volumes held	.12108
Volumes added (gross)	.11940
Microforms held	.07509
Current serials received	.12253
Expenditures for library materials	.12553
Expenditures for binding	.11266
Expenditures for salaries and wages	.12581
Other operating expenditures	.10592
Number of professional staff	.12347
Number of nonprofessional staff	.11297

From these weights an individual library can compute an index score that will indicate its relative position among ARL libraries with respect to the overall factor of library size. The data for each of the 10 variables are converted to standard normal form and multiplied by the appropriate weight. The resulting scores are expressed in terms of the number of standard deviations above or below the mean index score for ARL academic libraries. Thus, the formula* for calculating a library's 1979-80 index score is as follows:

.12108 (log of volumes held - 6.2916)/.2172
+.11940 (log of volumes added gross - 4.8412)/.2025
+.07509 (log of microforms - 6.0950)/.1763
+.12253 (log of current serials - 4.3432)/.2341
+.12553 (log of expenditures for materials - 6.2333)/.1636
+.11266 (log of expenditures for binding - 5.0480)/.2475
+.12581 (log of total salaries - 6.4675)/.2103
+.10592 (log of operating expenditures - 5.6773)/.2635
+.12347 (log of professional staff - 1.8281)/.1968
+.11297 (log of nonprofessional staff - 2.1512)/.2046

The index scores for the 99 academic libraries that were members of ARL during 1979-80 are shown on the following page. It is important to emphasize that these scores are only a summary description of library size, distributing ARL libraries along a normal curve, based on 10 quantitative measures that are positively correlated with one another in ARL libraries. The scores are in no way a qualitative assessment of the collections, services, or operations of these libraries.

---

*For calculation on a hand calculator, the formula can be mathematically simplified to: (.55746 x log of volumes held) + (.58963 x log of volumes added gross) + (.42592 x log of microforms) + (.52341 x log of current serials) + (.76730 x log of expenditures for materials) + (.45519 x log of expenditures for binding) + (.59824 x log of total salaries) + (.40197 x log of operating expenditures) + (.62739 x log of professional staff) + (.55215 x log of nonprofessional staff) - 26.79765.

APPENDIX E

FACULTY RESEARCH SUPPORT

The names of National Science Foundation (NSF) research grant awardees were obtained from a file maintained by the NSF Division of Information Systems. The file provided to the committee covered all research grant awards made in FY1978, FY1979, and FY1980 and included the names of the principal investigator and co-principal investigators for each award. Also available from this file was information concerning the field of science/engineering of the research grant and the institution with which the investigator was affiliated. This information was used in identifying which research grant recipients were on the program faculty lists provided by institutional coordinators.

The names of National Institutes of Health (NIH) and Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) research grant recipients (principal investigators only) were obtained from the NIH Information for Management Planning, Analysis, and Coordination System. This system contains a detailed record of all applications and awards in the various training and research support programs of these agencies. For the purposes of this study, information analogous to that available from the NSF file was extended for FY1978-80 research grant awardees and their records were matched with the program faculty lists. Measure 13 constitutes the fraction of program faculty members who had received one or more research grant awards from NSF (including both principal investigators and co-principal investigators), NIH, or ADAMHA during the FY1978-80 period.

R&D EXPENDITURES

Total university expenditures for R&D activities are available from the NSF Survey of Scientific and Engineering Expenditures at Universities and Colleges. A copy of the survey form appears on the following pages.

NSF FORM 411 (Dec 1979)

FORM APPROVED
OMB No. 99-R0279

NATIONAL SCIENCE FOUNDATION
Washington, D.C. 20550

SURVEY OF SCIENTIFIC AND ENGINEERING EXPENDITURES AT UNIVERSITIES AND COLLEGES, FY 1979

(Current and Capital Expenditures for Research, Development, and Instruction in the Sciences and Engineering)

Organizations are requested to complete and return this form to:

NATIONAL SCIENCE FOUNDATION
1800 G Street, N.W.
Washington, D.C. 20550
Attn: UNISG

This form should be returned by February 1, 1980. Your cooperation in returning the survey questionnaire promptly is very important.

Financial data are requested for your institution's 1979 fiscal year.

This information is solicited under the authority of the National Science Foundation Act of 1950, as amended. All information you provide will be used for statistical purposes only. Your response is entirely voluntary and your failure to provide some or all of the information will in no way adversely affect your institution.

All financial data requested on this form should be reported in thousands of dollars; for example, an expenditure of $25,342 should be rounded to the nearest thousand dollars and reported as $25.

Where exact data are not available, estimates are acceptable. Your estimates will be better than ours.

Please correct if name or address has changed

(Includes aggregate data from 567 universities and colleges but excludes 19 university-administered FFRDC's)

Include data for branches and all organizational units of your institution, such as medical schools and agricultural experiment stations. Also include hospitals or clinics owned, operated, or controlled by universities, and integrated operationally with the clinical programs of your medical schools. Exclude data for federally funded research and development centers (FFRDC's). A separate questionnaire is included in this package if your institution administers an FFRDC. **If you have any questions please contact Jim Hoehn (202-634-4674).**

Please enter the beginning and ending dates of your institution's fiscal year for which you are reporting on this form:

______________ through ______________

Please note in space below:

(1) Any suggestions to improve the design of the survey questionnaire, (2) any suggestions to improve the instructions, or (3) any comments on significant change in R&D in your institution.

(Attach additional sheets, if necessary.)

PLEASE TYPE OR PRINT NAME OF PERSON SUBMITTING THIS FORM	TITLE	AREA CODE	EXCH	NO.	EXT

NAME OF PERSON WHO PREPARED THIS SUBMISSION (If different from above)	TITLE	AREA CODE	EXCH	NO.	EXT

Please check and correct if necessary the name and address of your institution shown on the mailing label.	DATE

ITEM 1. CURRENT EXPENDITURES FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT (R&D) IN THE SCIENCES AND ENGINEERING, BY SOURCE OF FUNDS AND BASIC RESEARCH, FY 1979 (Include indirect costs)

ITEMS 1. & 2. INSTRUCTIONS

Separately budgeted research and development (R&D) includes all funds expended for activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit within the institution. **Include** equipment purchased under research project awards as part of "current funds." Research funds subcontracted to outside organizations should also be included. **Exclude** training grants, public service grants, demonstration projects, etc.

Under a. **Federal Government.** Report grants and contracts for R&D by all agencies of the Federal Government including indirect costs from these sources.

Under b. **State and local governments.** Include funds for R&D from State, county, municipal, or other local governments and their agencies. Include here State funds which support R&D at agricultural experiment stations.

Under c. **Industry.** Include all grants and contracts for R&D from profitmaking organizations, whether engaged in production, distribution, research, service, or other activities. Do not include grants and contracts from nonprofit foundations financed by industry, which should be reported under **All other sources.**

Under d. **Institutional funds.** Report funds which your institution spent for R&D activities including indirect costs from the following sources: (1) General-purpose State or local government appropriations; (2) general-purpose grants from industry, foundations, or other outside sources; (3) tuition and fees; (4) endowment income. In addition, estimate your institution's contribution to unreimbursed indirect costs incurred in association with R&D projects financed by outside organizations, and mandatory cost sharing on Federal and other grants. To estimate unreimbursed indirect costs, many institutions use a university-wide negotiated indirect cost rate multiplied by the base (e.g., direct salaries and wages, etc.) minus actual indirect cost recoveries. If your institution now separately budgets what was previously classified as departmental research, these data should be included in line d.

Under e. **All other sources.** Include foundations and voluntary health agencies grants for R&D, as well as all other sources not elsewhere classified. Funds from foundations which are affiliated with or grant solely to your institution should be included under d. Institutional funds. Funds for R&D received from a health agency that is a unit of a State or local government should be reported under State and local governments. Also include gifts from individuals that are restricted by the donor to research.

Please exclude from your response any R&D expenditures in the fields of education, law, humanities, music, the arts, physical education, library science, and all other nonscience fields.

Source of funds		(1) Total R&D expenditures	(2) Basic research
		(Dollars in thousands)	(Percent of column 1)
a. Federal Government	1110	$ 3,431,538	73.4 %
*b. State and local governments	1125	467,311	**Basic research** is directed toward an increase of knowledge; it is research where the primary aim of the **investigator** is a fuller knowledge or understanding of the subject under study rather than a practical application thereof.
c. Industry	1150	193,794	
d. Institutional funds	1160	716,241	
(1) Separately budgeted	1161	357,926	
(2) Underrecovery of indirect costs and cost sharing	1162	358,315	
*e. All other sources	1175	373,845	
f. TOTAL (sum of a through e)	1100	$ 5,182,729	68.5 %

CONFIDENTIALITY

Information received from individual institutions in lines 1161 and 1162, or estimates for basic research expenditures, will **not** be published or released; only aggregate totals will appear in publications.

*Combined data cell (See instructions for b and e).

Total R&D expenditures reported in line 1100 column (1) and line 1400 column (1) should be the same.
Federally financed R&D expenditures reported in line 1100 column (1) and line 1400 column (2) should be the same.

ITEM 2. TOTAL AND FEDERALLY FINANCED EXPENDITURES FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT, BY FIELD OF SCIENCE, FY 1979 (Include indirect costs and equipment).

Field of science	Illustrative disciplines		(Dollars in thousands)	
			(1) Total	(2) Federal
a. ENGINEERING (TOTAL)	Aeronautical, agricultural, chemical, civil, electrical, industrial, mechanical, metallurgical, mining, nuclear, petroleum, bio- and biomedical, energy, textile, architecture	1410	$ 715,454	$ 474,866
b. PHYSICAL SCIENCES (TOTAL)		1420	559,566	448,992
(1) Astronomy	Astrophysics, optical and radio, x-ray, gamma-ray, neutrino	1421	39,026	26,862
(2) Chemistry	Inorganic, organo-metallic, organic, physical, analytical, pharmaceutical, polymer science (exclude biochemistry)	1422	204,062	154,031
(3) Physics	Acoustics, atomic and molecular, condensed matter, elementary particles, nuclear structure, optics, plasma	1423	275,680	236,872
(4) Other	Used for multidisciplinary projects within physical sciences and for disciplines not requested separately	1424	40,798	31,227
c. ENVIRONMENTAL SCIENCES (TOTAL)	ATMOSPHERIC SCIENCES: Aeronomy, solar weather modification, meteorology, extra-terrestrial atmospheres GEOLOGICAL SCIENCES: Engineering geophysics, geology, geodesy, geomagnetism, hydrology, geochemistry, paleomagnetism, paleontology, physical geography, cartography, seismology, soil sciences OCEANOGRAPHY: Chemical, geological, physical, marine geophysics, marine biology, biological oceanography	1430	429,129	307,493
d. MATHEMATICAL AND COMPUTER SCIENCES (TOTAL)		1440	145,087	94,534
(1) Mathematics	Algebra, analysis, applied mathematics, foundations and logic, geometry, numerical analysis, statistics, topology	1441	65,637	49,043
(2) Computer sciences	Design, development, and application of computer capabilities to data storage and manipulation, information science	1442	79,450	45,491
e. LIFE SCIENCES (TOTAL)		1450	2,814,824	1,810,729
(1) Biological sciences	Anatomy, biochemistry, biophysics, biogeography, ecology, embryology, entomology, genetics, immunology, microbiology, nutrition, parasitology, pathology, pharmacology, physical anthropology, physiology, botany, zoology	1451	949,993	690,805
(2) Agricultural	Agricultural chemistry, agronomy, animal science, conservation, dairy science, plant science, range science, wildlife	1452	565,697	168,849
(3) Medical	Anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics, opthalmology, preventive medicine and community health, psychiatry, radiology, surgery, veterinary medicine, dentistry, pharmacy	1453	1,214,442	890,612
(4) Other	Used for multidisciplinary projects within life sciences	1454	84,692	60,463
f. PSYCHOLOGY (TOTAL)	Animal behavior, clinical, educational, experimental, human development and personality, social	1460	99,732	72,256
g. SOCIAL SCIENCES (TOTAL)		1470	290,057	153,674
(1) Economics	Econometrics, international, industrial, labor, agricultural, public finance and fiscal policy	1471	85,415	40,641
(2) Political science	Regional studies, comparative government, international relations, legal systems, political theory, public administration	1472	39,029	18,452
(3) Sociology	Comparative and historical, complex organizations, culture and social structure, demography, group interactions, social problems and welfare, theory	1473	72,669	46,739
(4) Other	History of science, cultural anthropology, linguistics, socio-economic geography	1474	92,944	47,842
h. OTHER SCIENCES, n.e.c. (TOTAL)*	To be used when the multidisciplinary and interdisciplinary aspects make the classification under one primary field impossible	1480	128,880	68,994
i. TOTAL (SUM of a through h) Check to insure that column totals are identical with data reported in item 1.		1400	5,182,729	3,431,538

*PLEASE EXCLUDE FROM YOUR RESPONSE ANY R&D EXPENDITURES IN THE FIELDS OF EDUCATION, LAW, HUMANITIES, MUSIC, THE ARTS, PHYSICAL EDUCATION, LIBRARY SCIENCE, AND ALL OTHER NONSCIENCE FIELDS.

ITEM 3. CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEERING FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION, BY FIELD OF SCIENCE AND SOURCE OF FUNDS, FY 1979

ITEM 3. INSTRUCTIONS

Report funds for facilities which were in process or completed during FY 1979. Expenditures for administration buildings, steam plants, residence halls, and other such facilities should be excluded unless utilized principally for research, development, or instruction in engineering or in the sciences. Land costs should be **excluded**. Exclude small equipment items in your current fund account costing approximately $300 or less per unit or as recommended by the Joint Accounting Group (JAG) or as determined by your institutional policy; these are to be reported under items 1 and 2.

Facilities and equipment expenditures **include** the following: (a) Fixed equipment such as built-in equipment and furnishings; (b) movable scientific equipment such as oscilloscopes and pulse-height analyzers; (c) movable furnishings such as desk; (d) architect's fees, site work, extension of utilities, and the building costs of service functions such as integral cafeterias and bookstores of a facility; (e) facilities constructed to house separate components such as medical schools and teaching hospitals; and (f) special separate facilities used to house scientific apparatus such as accelerators, oceanographic vessels, and computers.

Field of science		(Dollars in thousands) Total (1)	Federal (2)	All other sources (3)
a. Engineering	1710	$ 95,399	$ 22,060	$ 73,339
b. Physical sciences	1720	64,551	32,439	32,112
c. Environmental sciences	1730	25,293	8,970	16,323
d. Mathematical and computer sciences	1740	27,465	3,049	24,416
e. Life sciences	1750	456,477	92,567	363,910
f. Psychology	1760	7,803	1,767	6,036
g. Social sciences	1770	20,932	2,069	18,863
h. Other sciences, n.e.c.	1780	31,984	5,054	26,930
i. Total (sum of a through h)	1700	$ 729,904	$ 167,975	$ 561,929

APPENDIX F

Data on Publication Records

Data for measures 17 and 18 were furnished to the committee by the Institute for Scientific Information. The publication records of individual faculty members were derived from the 1978, 1979, and 1980 issues of Social Science Citation Index, compiled and maintained by the Institute. The faculty names (provided by institutional coordinators) were matched with the names of authors and coauthors of all articles published in social science journals during this three-year period. To facilitate the name-matching process, the institutional addresses of authors and the fields of the journals in which their articles appeared were compared with faculty members' university addresses and program fields.

Measure 17 constitutes the total number of 1978-80 articles that have been linked with the names of faculty in a program. Measure 18 is the fraction of program faculty members who had at least one article attributed to them during this three-year period. These measures should not be confused with measures 15 and 16, reported for programs in the mathematical and physical sciences, engineering, and the biological sciences. The latter pair of measures were derived from the Science Citation Index and were not based on matching the names of individual faculty members with the names of authors. A detailed description of the derivation of measures 15 and 16 is contained in Appendix F of the committee's first volume on programs in the mathematical and physical sciences. Data for measures 15 and 16 have been compiled for 148 research-doctorate programs in psychology and are presented in Appendix J of this volume.

Readers interested in a description of the Social Science Citation Index, on which measures 17 and 18 are based, may wish to consult the following references:

E. Garfield, "The 100 Articles Most Cited by Social Scientists, 1969-77," Current Contents: Social and Behavioral Sciences, #32, August 7, 1978.

Norman S. Endler, J. Philippe Rushton, and Henry L. Roediger III, "Productivity and Scholarly Impact of British, Canadian, and U.S. Departments of Psychology," American Psychologist, December 1978, pp. 1064-1082.

APPENDIX G

CONFERENCE ON THE ASSESSMENT OF QUALITY OF GRADUATE EDUCATION PROGRAMS

September 27-29, 1976
Woods Hole, Massachusetts

Participants

Robert A. ALBERTY	Dean of Science, Massachusetts Institute of Technology
Charles ANDERSEN	Coordinator, Education Statistics, American Council on Education
Richard C. ATKINSON	Acting Director, National Science Foundation
R. H. BING	Chairman, Department of Mathematics, University of Texas at Austin
David W. BRENEMAN	Senior Fellow, The Brookings Institution
John E. CANTLON	Vice-President for Research and Graduate Studies, Michigan State University
Henry E. COBB	Professor, Department of History, Southern University
Monroe D. DONSKER	Professor, Courant Institute of Mathematical Sciences, New York University
David E. DREW	Senior Scientist, Rand Corporation
E. Alden DUNHAM	Program Officer, Carnegie Corporation of New York
David A. GOSLIN	Executive Director, Assembly of Behavioral and Social Sciences, National Research Council
Hanna H. GRAY	Provost, Yale University
Norman HACKERMAN	President, Rice University
Philip HANDLER	President, National Academy of Sciences
David D. HENRY	President Emeritus, University of Illinois
Roger W. HEYNS	President, American Council on Education
Lyle V. JONES	Vice Chancellor and Dean, Graduate School, University of North Carolina at Chapel Hill
Charles V. KIDD	Executive Secretary, Association of American Universities
Winfred P. LEHMANN	Professor, Department of Linguistics, University of Texas at Austin
Charles T. LESTER	Vice-President of Arts and Sciences, Emory University

Gardner LINDZEY	Director, Center for Advanced Study in the Behavioral Sciences (Chairman)
Raymond P. MARIELLA	Dean of the Graduate School, Loyola University
Cora B. MARRETT	Center for Advanced Study in the Behavioral Sciences
Peter S. McKINNEY	Acting Dean, Graduate School of Arts and Sciences, Harvard University
Doris H. MERRITT	Dean, Research and Sponsored Programs, Indiana University/Purdue University
John Perry MILLER	Corporation Officer for Institutional Development, The Campaign for Yale
Lincoln E. MOSES	Professor, Department of Family, Community and Preventive Medicine, Stanford University Medical Center
Frederick W. MOTE	Professor, Department of East Asian Studies, Princeton University
Thomas A. NOBLE	Executive Associate, American Council of Learned Societies
J. Boyd PAGE	President, The Council of Graduate Schools in the United States
C. K. N. PATEL	Director, Physical Research Laboratory, Bell Laboratories
Michael J. PELCZAR, Jr.	Vice-President for Graduate Studies and Research, University of Maryland, College Park
Frank PRESS	Chairman, Department of Earth and Planetary Sciences, Massachusetts Institute of Technology
John J. PRUIS	President, Ball State University
Lorene L. ROGERS	President, University of Texas at Austin
John SAWYER	President, The Andrew W. Mellon Foundation
Robert L. SPROULL	President, University of Rochester
Eliot STELLAR	Provost, University of Pennsylvania
Alfred S. SUSSMAN	Dean, Horace H. Rackham School of Graduate Studies, University of Michigan
Donald C. SWAIN	Academic Vice-President, University of California System
Mack E. THOMPSON	Executive Director, American Historical Association
Charles V. WILLIE	Professor of Education and Urban Studies, The Graduate School of Education, Harvard University
H. Edwin YOUNG	Chancellor, University of Wisconsin, Madison
Harriet A. ZUCKERMAN	Associate Professor, Department of Sociology, Columbia University

SUMMARY

September 27-29, 1976, Woods Hole, Massachusetts

Report of the Conference

A substantial majority of the Conference believes that the earlier assessments of graduate education have received wide and important use: by students and their advisors, by the institutions of higher education as aids to planning and the allocation of educational functions, as a check of unwarranted claims of excellence, and in social science research.

The recommendations which follow attempt to distill the main points of consensus within the conference. This report does not in any sense adequately represent the rich diversity of points of view revealed during the Conference nor the deep and real differences in belief among the participants.

Recommendations

1. A new assessment of graduate programs is needed, and we believe that the Conference Board is an appropriate sponsor. While we do not propose to specify the details of this assessment, we are prepared to suggest the following guidelines.

2. The assessment should include a modified replication of the Roose-Andersen study, with the addition of some fields and the subdivision of others.

3. It is important to provide additional indices relevant to program assessment such as some of those cited by Breneman, Drew, and Page. The Conference directs specific attention to the CGS/ETS Study currently nearing completion and urges that the results of that study be carefully examined and used to the fullest possible extent.

4. The initial assessment study should be one of surveying the quality of scholarship and research and the effectiveness of Ph.D. programs in the fields selected for inclusion.

    a. It is intended that the study be carried forward on a continuing basis to provide valuable longitudinal data. This should be implemented along the lines suggested by Moses, involving annual assessment of subsets of programs.

    b. Every eligible institution should be given the choice of whether to be included in the study.

    c. Each program is to be characterized by a set of scores, one for each selected index. The presentation of scores for all reported indices should be accompanied by a discussion of their substantive meaning. In addition, appropriate measures of uncertainty should accompany all tables of results.

5. We propose a simultaneous study exploring ways of reviewing goals of graduate education other than research and scholarship. This would involve review of other doctoral programs and selected master's programs.

APPENDIX H

PLANNING COMMITTEE FOR THE STUDY OF THE QUALITY OF RESEARCH-DOCTORATE PROGRAMS

September 1978

Robert M. Bock
Dean of the Graduate School
University of Wisconsin
at Madison

Philip E. Converse
Institute for Social Research
University of Michigan

Richard A. Goldsby
Department of Genetics
Stanford University

Hugh Holman
Department of English
University of North Carolina
at Chapel Hill

Lyle V. Jones
Vice Chancellor and Dean,
Graduate School
University of North Carolina
at Chapel Hill

Gardner Lindzey, Co-Chairman
Director
Center for Advanced Study in the
Behavioral Sciences
Stanford, California

Sterling McMurrin
Dean of the Graduate School
University of Utah

Lincoln E. Moses
Administrator
Energy Information
Administration
Washington, D.C.

George Pake
Xerox Corporation
Palo Alto, California

C. K. N. Patel
Director, Physical Research
Bell Laboratories

Cornelius Pings
Dean of the Graduate School
California Institute of
Technology

Gordon Ray
President
The John Simon Guggenheim
Memorial Foundation

Harriet A. Zuckerman,
Co-Chairman
Department of Sociology
Columbia University

APPENDIX I

REGION AND STATE CODES
FOR THE UNITED STATES AND POSSESSIONS
(and U.S. Government)

REGION 1 - NEW ENGLAND

11	Maine
12	New Hampshire
13	Vermont
14	Massachusetts
15	Rhode Island
16	Connecticut

REGION 2 - MIDDLE ATLANTIC

21	New York
22	New Jersey
23	Pennsylvania

REGION 3 - EAST NORTH CENTRAL

31	Ohio
32	Indiana
33	Illinois
34	Michigan
35	Wisconsin

REGION 4 - WEST NORTH CENTRAL

41	Minnesota
42	Iowa
43	Missouri
44	North Dakota
45	South Dakota
46	Nebraska
47	Kansas

REGION 5 - SOUTH ATLANTIC

51	Delaware
52	Maryland
53	District of Columbia
54	Virginia
55	West Virginia
56	North Carolina
57	South Carolina
58	Georgia
59	Florida

REGION 6 - EAST SOUTH CENTRAL

61	Kentucky
62	Tennessee
63	Alabama
64	Mississippi

REGION 7 - WEST SOUTH CENTRAL

71	Arkansas
72	Louisiana
73	Oklahoma
74	Texas

REGION 8 - MOUNTAIN

81	Montana
82	Idaho
83	Wyoming
84	Colorado
85	New Mexico
86	Arizona
87	Utah
88	Nevada

REGION 9 - PACIFIC

90	Guam
91	Washington
92	Oregon
93	California
94	Alaska
95	Hawaii
96	Virgin Islands
97	Panama Canal Zone
98	Puerto Rico

APPENDIX J

Alternative Measures of Published Articles in Psychology

Data from the 1978 and 1979 issues of Science Citation Index have been compiled on published articles associated with research-doctorate programs in psychology and are presented in Table J-1. (Comparable data are not available in any of the other social and behavioral science disciplines.) Publication counts were associated with programs on the basis of the discipline of the journal in which the article appeared and the institution with which the author was affiliated. Two measures have been derived from the publication records: measure 15, the total number of articles published in the 1978-79 period that have been associated with a research-doctorate program, and measure 16, an estimation of the "influence" of these articles. The latter is a product of the number of articles attributed to a program and the estimated influence of the journals in which these articles appeared. The influence of a journal is determined from the weighted number of times, on the average, an article in that journal is cited--with references from frequently cited journals counting more heavily. A more detailed description of the derivation of these measures may be found in Appendix F of the committee's volume on the mathematical and physical sciences, wherein a discussion of the particular limitations of these measures is given on pages 28-29.

Measures 15 and 16 have also been compiled and reported for research-doctorate programs in 16 disciplines in the mathematical and physical sciences, engineering, and the biological sciences. The availability in psychology of measures 15 and 16 as well as measures 17 and 18 affords an opportunity to compare program results on these two pairs of measures. Also of interest are the correlations, reported on the second page of Table J.1, of measures 15 and 16 with each of the other measures used to evaluate programs in psychology. It is not surprising to find a high correlation (r = .78) between measures 15 and 17 since both are estimates of total publication productivity in a program. In comparing these two measures, however, one should keep in mind that they are based on article counts from different sets of journals (Science Citation Index versus Social Science Citation Index) and that the methodologies employed to derive these counts were quite different.

TABLE J.1 Alternative Measures of Published Articles in Psychology
(Raw and Standardized Values)

Prog No.	Published Articles (15)	Published Articles (16)	Prog No.	Published Articles (15)	Published Articles (16)	Prog No.	Published Articles (15)	Published Articles (16)	Prog No.	Published Articles (15)	Published Articles (16)	Prog No.	Published Articles (15)	Published Articles (16)
001.	0		021.	43		041.	1		061.	24		081.	0	
	38	*41*		*70*	*65*		*39*	*41*		*56*	*53*		*38*	*41*
002.	13		022.	21		042.	11		062.	7		082.	11	
	48	*44*		*54*	*52*		*47*	*66*		*44*	*44*		*47*	*45*
003.	26		023.	9		043.	12		063.	30		083.	10	
	58	*55*		*45*	*57*		*47*	*45*		*61*	*56*		*46*	*46*
004.	13		024.	18		044.	21		064.	30		084.	9	
	48	*50*		*52*	*54*		*54*	*47*		*61*	*56*		*45*	*53*
005.	2		025.	10		045.	44		065.	16		085.	0	
	40	*41*		*46*	*59*		*71*	*60*		*50*	*45*		*38*	*41*
006.	16		026.	7		046.	4		066.	7		086.	12	
	50	*45*		*44*	*47*		*41*	*42*		*44*	*43*		*47*	*65*
007.	2		027.	8		047.	NA		067.	0		087.	8	
	40	*41*		*44*	*42*			*NA*		*38*	*41*		*44*	*44*
008.	11		028.	28		048.	4		068.	7		088.	29	
	47	*52*		*59*	*58*		*41*	*42*		*44*	*42*		*60*	*61*
009.	23		029.	10		049.	12		069.	6		089.	10	
	55	*51*		*46*	*45*		*47*	*47*		*43*	*44*		*46*	*45*
010.	6		030.	1		050.	16		070.	7		090.	9	
	43	*45*		*39*	*41*		*50*	*47*		*44*	*42*		*45*	*42*
011.	7		031.	9		051.	42		071.	20		091.	6	
	44	*43*		*45*	*43*		*69*	*89*		*53*	*48*		*43*	*42*
012.	15		032.	21		052.	18		072.	13		092.	6	
	50	*54*		*54*	*48*		*52*	*49*		*48*	*51*		*43*	*43*
013.	5		033.	41		053.	2		073.	33		093.	16	
	42	*43*		*69*	*83*		*40*	*42*		*63*	*59*		*50*	*47*
014.	46		034.	0		054.	9		074.	6		094.	19	
	72	*61*		*38*	*41*		*45*	*44*		*43*	*42*		*52*	*55*
015.	0		035.	19		055.	3		075.	6		095.	8	
	38	*41*		*52*	*60*		*41*	*41*		*43*	*42*		*44*	*44*
016.	0		036.	25		056.	13		076.	23		096.	32	
	38	*41*		*57*	*50*		*48*	*48*		*55*	*53*		*62*	*61*
017.	13		037.	40		057.	49		077.	34		097.	10	
	48	*43*		*68*	*68*		*75*	*83*		*64*	*74*		*46*	*46*
018.	32		038.	7		058.	28		078.	36		098.	3	
	62	*60*		*44*	*45*		*59*	*63*		*65*	*64*		*41*	*41*
019.	31		039.	7		059.	15		079.	2		099.	5	
	61	*61*		*44*	*42*		*50*	*45*		*40*	*41*		*42*	*45*
020.	13		040.	1		060.	27		080.	12		100.	17	
	48	*43*		*39*	*41*		*58*	*59*		*47*	*47*		*51*	*52*

NOTE: On the first line of data for every program, raw values for each measure are reported; on the second line values are reported in standardized form, with mean = 50 and standard deviation = 10. "NA" indicates that the value for a measure is not available. Since the scale used to compute measure 16 is entirely arbitrary, only values in standardized form are reported for this measure.

TABLE J.1 Alternative Measures of Published Articles in Psychology
(Raw and Standardized Values)

Prog No.	Published Articles (15)	Published Articles (16)
101.	23 *55*	*52*
102.	36 *65*	*63*
103.	33 *63*	*57*
104.	21 *54*	*58*
105.	36 *65*	*57*
106.	7 *44*	*46*
107.	3 *41*	*42*
108.	20 *53*	*53*
109.	0 *38*	*41*
110.	94 *99*	*89*
111.	7 *44*	*44*
112.	20 *53*	*50*
113.	33 *63*	*54*
114.	21 *54*	*50*
115.	21 *54*	*58*
116.	3 *41*	*41*
117.	17 *51*	*48*
118.	7 *44*	*42*
119.	14 *49*	*45*
120.	10 *46*	*49*
121.	12 *47*	*49*
122.	7 *44*	*42*
123.	15 *50*	*68*
124.	28 *59*	*50*
125.	18 *52*	*49*
126.	5 *42*	*44*
127.	8 *44*	*44*
128.	12 *47*	*47*
129.	1 *39*	*41*
130.	37 *66*	*64*
131.	1 *39*	*41*
132.	8 *44*	*44*
133.	7 *44*	*44*
134.	20 *53*	*49*
135.	6 *43*	*44*
136.	4 *41*	*41*
137.	22 *55*	*47*
138.	23 *55*	*49*
139.	12 *47*	*46*
140.	15 *50*	*48*
141.	9 *45*	*46*
142.	31 *61*	*63*
143.	13 *48*	*44*
144.	11 *47*	*47*
145.	7 *44*	*43*
146.	52 *77*	*75*
147.	NA	*NA*
148.	7 *44*	*43*
149.	31 *61*	*74*
150.	0 *38*	*41*

Summary Statistics Describing Measures 15 and 16

Measure	Number of Programs Evaluated	Mean	Standard Deviation	DECILES 1	2	3	4	5	6	7	8	9
Publication Records												
15 Raw Value	148	16	14	2	6	7	9	12	15	20	25	33
Std Value	148	50	10	40	43	44	45	47	50	53	57	63
16 Std Value	148	50	10	41	42	43	45	47	49	52	57	63

Correlations of Measures 15 and 16 with Other Program Measures

	Measure 01	02	03	04	05	06	07	08	09	10	11	12	13	14	17	18
Measure 15	.68	.37	.25	.30	.18	.14	.43	.67	.64	.09	.69	.56	.42	.55	.78	.42
Measure 16	.59	.36	.19	.43	.14	.18	.56	.78	.75	.01	.81	.71	.56	.53	.77	.45

National Academy Press

The National Academy Press was created by the National Academy of Sciences to publish the reports issued by the Academy and by the National Academy of Engineering, the Institute of Medicine, and the National Research Council, all operating under the charter granted to the National Academy of Sciences by the Congress of the United States.

ISBN 0-309-03342-X

BEST AVAILABLE COPY